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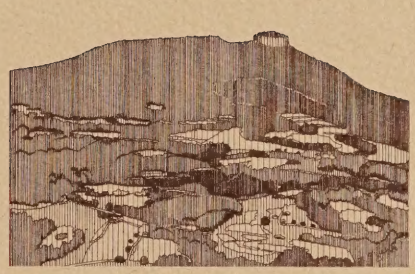

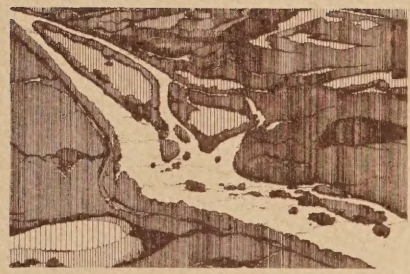

PILOT MOUNTAIN STATE PARK

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MASTER PLAN
PILOT MOUNTAIN STATE PARK

PREPARED FOR
STATE OF NORTH CAROLINA
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
DIVISION OF STATE PARKS

BY RICHARD C. BELL ASSOCIATES, INC.
PLANNING CONSULTANTS LANDSCAPE ARCHITECTS
AND
THOMAS W. MORSE
CONSULTING LANDSCAPE ARCHITECT

DECEMBER 1970

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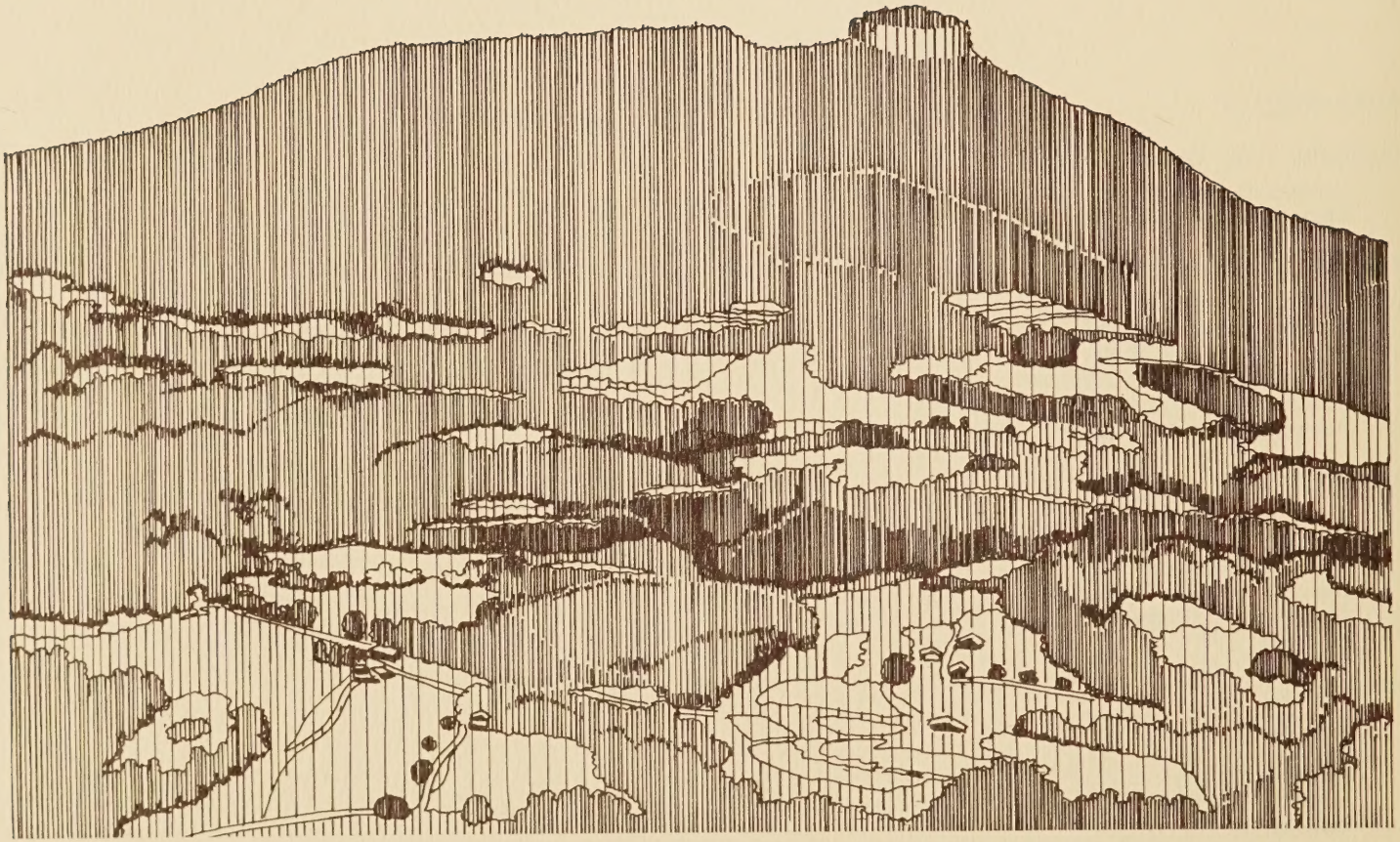


FOREWORD

This master plan presents a unified set of guidelines and recommendations for preserving the natural features and enhancing the quality of the environment in Pilot Mountain State Park, and for developing and managing the state park for optimum public use. It is a broad long range plan on which to base the preparation of detailed designs and is intended for the guidance of administrative and field personnel as well as planners.

PURPOSE AND OBJECTIVES

STATEMENT OF PURPOSE

The purpose of Pilot Mountain Mountain State Park is, as it must be, based on two things: first, *Principles Governing the Establishment, Extension and Development of the State Park System of the State of North Carolina,* and, second, the natural qualities and features of the state park itself.

The *Principles* specify that:

> The purpose of the North Carolina State Park System shall be TO SERVE THE PEOPLE OF NORTH CAROLINA AND THEIR VISITORS BY:
>
> 1. Preserving and protecting natural areas of unique or exceptional scenic value not only for the inspiration and benefit of the present generation, but, also for generations to come.
> 2. Establishing and operating state parks that provide recreational use of natural resources and outdoor recreation in natural surroundings.
> 3. Portraying and interpreting plant and animal life, geology, and all other natural features and processes included in the various state parks.
> 4. Preserving, protecting and portraying scientific sites of statewide importance.

The purpose of Pilot Mountain State Park is to serve the people of North Carolina and their visitors in these ways:

1. Preserve and protect from fire, vandalism, adverse use and adverse development the vegetation, streams, geologic formations, and scenic values of the state park.
2. Protect the animal life of the state park from hunting, trapping and hazards engendered by human beings and their domestic animals.
3. Provide opportunities and facilities for viewing and enjoying the major scenic values of the state park.
4. Provide opportunities and facilities for appropriate recreational uses of the natural resources of the state park.
5. Provide interpretive programs and facilities that will help park users gain a better knowledge and understanding of the plant and animal life, geology and ecology of the state park.
6. Provide opportunities and facilities for portraying and interpreting the historical and archaeological features of the state park.

MANAGEMENT OBJECTIVES

Though the purpose of Pilot Mountain State Park is stated in simple terms, carrying out this purpose is a complex job requiring the application of many different skills, professional and nonprofessional, and the dedicated effort of many people. The purpose cannot be carried out in one fell swoop, but only through the orderly accomplishment of a series of intermediate steps or management objectives.

It is recommended that the management objectives for Pilot Mountain State Park be:

Land Acquisition

Acquire all land within the state park boundaries delineated in this master plan.

Personnel Administration

Staff the state park with qualified employees as recommended in this master plan.

Organize these employees as recommended in this master plan.

Plan and execute the training programs required to enable each employee to perform the duties and responsibilities of his present job efficiently and effectively and to prepare him for promotion.

The *basic objective* is to render *high quality* public service efficiently and effectively.

Protection, Law Enforcement, Park User Safety

Construct the facilities, acquire the equipment, employ and train the personnel and prepare and execute the plans and programs required to:

protect the natural and man made features of the state park from fire, vandalism, trespass and adverse use;

protect the animal life of the state park from hunting, trapping and molestation by humans and domestic animals;

maintain law and order within the state park;

provide adequate measures for the safety and protection of park users.

Development

Prepare detailed designs, plans and specifications for and construct the developments and facilities recommended in this master plan.

Encourage and guide development on private land of appropriate facilities and services to supplement those provided in the state park. (Riding stables, campgrounds and stores to serve campers are examples of appropriate facilities and services.)

Operation for Public Use

Keep all developments and facilities for public use always neat and clean.

Encourage city and county park and recreation departments to include use of the state park in the programs they plan for their patrons.

Carry on a program to emphasize the recreational use of natural resources through such activities as hiking, walk-in camping, and float trips.

Maintenance

Maintain all developments and facilities in first class condition.

Prepare and up-date as needed master and annual maintenance programs.

Interpretation and Education

Conduct the natural history research necessary to guide the interpretation of the flora, fauna, geology and ecology of the state park.

Conduct the historical and archeological research necessary to guide:

the restoration, preservation and interpretation of the Hauser homestead and farm

the interpretation of the history of transportation as related to the transportation structures in evidence in and adjacent to the state park

the interpretation of the history of Indians as related to the state park.

Establish and maintain good working relationship with:

appropriate members of the faculties of universities, colleges, and public and private secondary schools in the region

nature study, bird, camping, hiking and similar clubs and organizations in the region

local chapters of state and national organizations interested in preserving the quality of the environment

local historical societies with interests related to the state park

individuals well qualified in phases of history and natural history related to the state park.

Secure the volunteer assistance of these individuals and groups in conducting the above research and in planning and executing interpretative programs.

Develop a comprehensive interpretative program that will effectively convey to park users knowledge and understanding of:

the flora, fauna, geology and ecology of the state park

life on an early nineteenth century Piedmont farm and the impact of agriculture on the ecology

the changes in modes of transportation as portrayed by the transportation structures existing in the state park and the impact of these changes on the ecology

the history of Indians in and around the state park and their impact on the ecology

Encourage and assist universities, colleges, and public and private primary and secondary schools to use the state park for educational purposes especially in the fields of natural science and ecology.

Information

Provide the facilities and services required to orient park users and inform them of the facilities and services available to them.

Establish and maintain good relations with the immediate neighbors of the state park and with the governing bodies of Stokes, Surry and Yadkin Counties and the incorporated towns in the immediate vicinity of the state park.

Establish and maintain good working relations with the newspapers, radio and television stations, and other news media in the area.

Present programs about the state park to civic and other local groups and to schools.

THE PARK AND THE REGION

1. PILOT MOUNTAIN
2. HANGING ROCK
3. STONE MOUNTAIN

0 10 20 30 40 50

SCALE IN MILES

GENERAL INFORMATION

Location

Most of Pilot Mountain State Park lies in the southeastern corner of Surry County. The section of the state park containing Pilot Mountain lies along and southwest of U.S. Highway 52 about midway between the towns of Pinnacle and Pilot Mountain and fronts on the highway for some two and a half miles. The section along the Yadkin River borders Secondary Road 2072 and runs south from this road across the river into Yadkin County where there are 284 acres parallel to the river. East and west this section runs from near the community of Shoals to a little beyond the mouth of Horne Creek.

General Description

Three distinct sections are included in Pilot Mountain State Park: the Pilot Mountain section which includes Pilot Mountain itself; the Yadkin River section which includes both banks of the river for a distance of about two miles; and a corridor 300 feet wide and five miles long connecting the Pilot Mountain and Yadkin River sections.

The two outstanding natural features of the state park are the geologic formation known as Pilot Mountain and the Yadkin River.

The dominant feature is Pilot Mountain which, because of its height and unique form, has been a landmark to Indian and white man alike. Indians called it Jomeokee which meant Great Guide or Pilot. Early settlers called it Mount Ararat and Stonehead Mountain. The pinnacle has an elevation of 2,421 above sea level and rises steeply some 1,400 feet above the surrounding countryside. The pinnacle or "knob" owes it prominence to the fact that it rises vertically more than 200 feet from its base. *Sterlings Southern Third Reader,* published in 1875, devotes considerable space to Pilot Mountain and informs us that:

> "The result of measurements taken by President Caldwell and Professor Andrews is as follows:
>
> Height of the Pilot, from the base near Grassy Creek, to the top of the trees, is 1,551 feet. Elevation of the pinnacle, on the north side, at the place of ascent, 205 feet. Elevation of the same, on the south side 250 feet. Highest perpendicular rocks, on the south side, 114 feet."

Below Pilot Mountain, the rest of the state park, except for the flat flood plain along the river, has the typical rolling topography of the upper Piedmont. The land pattern varies from the wooded slopes of Pilot Mountain and the hardwood portions of the river section to the recently cultivated open fields along Grassy and Pilot Creeks. The river islands are still in cultivation.

With its islands and rocky shoals, the stretch of the Yadkin River within the state park is one of the most scenic along the entire length of the river. Parts of several small streams are included in the state park, the largest of these being Grassy Creek and Pilot Creek.

The Establishment of Pilot Mountain State Park

On Wednesday, July 24, 1968 between the hours of 9:30 a.m. and 3.25 p.m., in the basement of the Surry County Courthouse, 18 property owners executed deeds to and received checks for land lying on and around Pilot Mountain. Four of these deeds were made directly to the State of North Carolina (another deed to the State was executed about three weeks later) and 13 deeds were made to the Pilot Mountain Preservation and Park Committee, Inc. bringing to 29 the number of tracts it had acquired. The Pilot Mountain Preservation and Park Committee, Inc. immediately transferred to the State of North Carolina all the land it had acquired and at 3:45 p.m. the establishment of Pilot Mountain State Park was officially declared. This 2,143.408 acre area thus became North Carolina's fourteenth state park.

This act brought to fruition almost two years of hard work and determined effort by public spirited citizens in Davie, Forsyth, Guilford, Stokes, Surry and Yadkin Counties.

In the latter half of 1966, concerned over the possibility of intensive commercial development of Pilot Mountain and consequent irreparable damage to its natural features, interested citizens and organizations in northwest North Carolina began to search for ways and means of protecting and preserving the natural beauty of the area. They soon decided that this might best be accomplished by establishing Pilot Mountain and land surrounding it as a state park. Doing so, they felt, would not only assure preservation and protection, but also would add much needed natural open space to help meet pressing recreation needs.

At the request of a number of interested citizens, the Northwest Economic Development Commission accepted the responsibility of coordinating the effort to establish Pilot Mountain as a state park. By a resolution adopted on November 16, 1966, the Commission committed itself to work with state officials to determine the feasibility of Pilot Mountain and surrounding land for state park purposes.

Following a series of field investigations made by its staff during the latter part of 1966 and the early part of 1967, the Division of State Parks made the following recommendation:

> "It is recommended that Pilot Mountain and the necessary adjoining property be acquired as soon as fiscally possible in order to preserve, in a natural condition for future generations, this unique feature of the Sauratown Mountains and to provide for urgently needed outdoor recreation in a heavily populated section of North Carolina."

On April 17, 1967 Joe C. Matthews, Executive Director of the Northwest Economic Development Commission, appeared before the State Parks Committee of the Board of Conservation and Development to advocate the establishment of a state park at Pilot Mountain.

At a special meeting in High Point on August 29, 1967 the Board of Conservation and Development passed the following resolution:

> WHEREAS, Pilot Mountain Preservation and Park Committee, Inc. has offered to give approximately 1600 acres of land, including Pilot Mountain, in Surry County to the State of North Carolina for State Park purposes, and
>
> WHEREAS, the property has been duly investigated and found suitable for this purpose, NOW
>
> THEREFORE BE IT RESOLVED, that the Board of Conservation and Development approve this gift and that upon the receipt of a mutually acceptable deed, respectfully requests the Department of Administration to obtain the necessary approval of this gift from the Governor and Council of State.

In the meantime, the Pilot Mountain Preservation and Park Committee was incorporated on August 14, 1967 by Huber Hanes, Jr., Mrs. Nancy E. East, and James A. Gray, all of Winston-Salem. The 60 member Committee, incorporated for the purpose of raising funds to be donated to the state for the purchase of land for Pilot Mountain State Park, went to work at once. It elected P. Huber Hanes, Jr. Chairman, Joe Pell, Jr., Vice Chairman, Mrs. William E. East, Secretary, Frank Comer, Treasurer and Joe C. Matthews, Executive Secretary, and set up County Campaign Committees in Davie, Forsyth, Guilford, Stokes, Surry and Yadkin Counties.

So successful were the Committee's efforts that it exceeded its goal of raising $350,000 by early January, 1968 — less than five months after its incorporation! Nearly 12,000 persons throughout the state contributed money for the purchase of land for Pilot Mountain State Park.

This successful effort provided the matching funds needed by the State of North Carolina to obtain Federal grants and the State applied for grants from the Land and Water Conservation Fund and the Appalachian Regional Commission. The grants were approved, and on July 19, 1968 the Regional Director, Southeast Region, Bureau of Outdoor Recreation presented to Governor Dan Moore a check for $1,040,890.90 covering a grant of $657,853.90 from the Land and Water Conservation Fund and a grant of $383,037.00 from the Appalachian Regional Commission.

While procedures to secure Federal grants were being carried out, the Pilot Mountain Preservation and Park

Committee undertook to option the tracts within the proposed state park boundary. By July, 1968 the Committee had secured options on 34 tracts of land totaling 2143.408 acres—all but 2.441 of the 2145.849 it had set out to option.

Total cost of the 2143 acres was $1,321,225.00 of which $1,039,777.81 came from Federal grants and $281,447.19 from funds raised by the Pilot Mountain Preservation and Park Committee, Inc. In addition, the Committee expended $97,950.00 on appraisals, legal fees, surveys (including part of the cost of a topographic survey) and administrative expenses.

The State is currently negotiating with the owner of the unoptioned 2.441 acre tract in an attempt to arrive at a mutually acceptable selling price for the property and thus eliminate the necessity for condemnation proceedings.

The Division of State Parks and the Pilot Mountain Preservation and Park Committee, Inc. now turned their attention to the feasibility of adding to Pilot Mountain State Park land along the Yadkin River with the object of preserving a section of the river in its natural state. It was decided that this was not only feasible but highly desirable. Acting on the recommendation of the Division of State Parks, the Board of Conservation and Development passed the following resolution on February 15, 1969:

> WHEREAS, the Pilot Mountain Preservation and Park Committee has expressed a desire to add additional lands to the existing Pilot Mountain State Park and which said proposed lands consists of two islands in the Yadkin River and surrounding lands on the Surry-Yadkin County line, and
>
> WHEREAS, this site is located approximately five (5) miles south of the existing Pilot Mountain State Park and affords excellent opportunities for future recreational use development and is a site that can be connected to the existing Pilot Mountain State Park by an access corridor and operated as a satellite area, NOW
>
> THEREFORE BE IT RESOLVED, That the Board of Conservation and Development recommends that these islands and surrounding lands be accepted for addition to the Pilot Mountain State Park when minimum acreage in accordance with those specified in "Principles Governing the Establishment, Extension and Development of the State Park System of the State of North Carolina" is made available together with a connecting access corridor with the existing Pilot Mountain State Park and that said corridor is to meet recommendations set forth by the Division of State Parks.

The boundaries designated for the Yadkin River section of the state park embrace 1397.11 acres of which approximately 284 are in Yadkin County, 959 (including 28.09 acres in railroad right-of-way) are in Surry County, and 154 are in the waters of the Yadkin River.

With the same verve and enthusiasm that had distinguished it before, the Pilot Mountain Preservation and Park Committee tackled the job of raising the money needed to match Federal grants. And with the same result — the required funds were quickly raised. Contributions from the six-county area totaled $185,000.

Again, the committee undertook the job of securing options on land within the designated boundaries, and again did an outstanding job, securing options from 36 of 37 owners on 53 of the 54 tracts to be included in the state park.

A grant of $285,607 from the Land and Water Conservation Fund was approved June 30, 1970 and a grant of $171,364 from the Appalachian Regional Commission was approved on August 10, 1970. With the $115,477 contributed by the Pilot Mountain Preservation and Park Committee, a total of $572,448 was available for purchase of land in the river section and corridor. In addition, the Committee expended some $70,000 on surveys and mapping, appraisals, legal fees and administrative expenses.

On Wednesday, August 26 in the Yadkin County Courthouse and on Thursday, August 27 in the Surry County Courthouse, the Pilot Mountain Preservation and Park Committee, Inc. exercised the options it had secured and then transferred title to the State of North Carolina. On August 27, 1970, the land on both sides of a two-mile stretch of the Yadkin River and the land in the Corridor became part of Pilot Mountain State Park.

Following this transfer, the State began negotiating with the owner of the one unoptioned tract in the river section in an effort to arrive at a mutually acceptable selling price for the property and thus eliminate the necessity for condemnation proceedings. At the end of 1970, these negotiations were still underway.

TABLE 1
ESTIMATED POPULATION DATA FOR NORTH CAROLINA COUNTIES

COUNTY	POPULATION 1970	POPULATION INCREASE PERCENT (1960-1970)	POPULATION INCREASE AVERAGE ANNUAL RATE (4/1/60-7/1/68)	PERCENT URBAN	DENSITY PER SQUARE MILE 1960	DENSITY PER SQUARE MILE 1970	ESTIMATED POPULATION BY AGE GROUPS – 1968 0-17	18-44	45+	PER CAPITA INCOME - 1966 AMOUNT	RANK IN STATE
Counties Within 50 Miles of Pilot Mountain State Park											
DAVIDSON(1)	95,627	20.3	2.16	37.1	143.8	173.0	34,377	38,935	21,651	$2,337	20
DAVIE	18,855	12.7	1.62	13.4	63.1	71.1	6,368	7,572	5,182	2,199	33
FORSYTH	214,348	13.2	1.45	68.8	452.6	512.2	75,380	80,718	57,442	3,043	3
GUILFORD(2)	288,590	17.1	1.47	76.3	376.4	440.7	96,862	107,718	73,760	3,078	2
STOKES	23,782	6.6	1.08	00.0	48.8	52.1	8,586	9,611	6,196	1,743	56
SURRY	51,415	6.7	1.18	25.0	89.9	95.9	17,427	21,412	14,293	2,276	25
YADKIN	24,599	7.9	.60	00.0	67.9	73.2	7,839	9,085	7,047	2,000	41
Counties Within 51-75 Miles of Pilot Mountain State Park											
ALAMANCE(3)	96,362	12.5	1.17	52.4	199.8	224.7	32,842	34,258	27,274	$2,686	8
ALEXANDER	19,466	24.6	1.88	00.0	60.3	75.1	6,111	6,840	5,290	2,353	18
IREDELL	72,197	15.5	1.66	44.2	106.2	122.6	25,876	25,159	20,644	2,420	15
RANDOLPH(4)	76,358	24.2	2.65	30.2	77.1	95.7	25,096	30,682	20,735	2,281	24
ROWAN	90,035	8.7	1.56	42.1	158.4	162.9	28,529	33,519	32,106	2,437	13
WILKES	49,524	9.4	1.17	6.8	59.3	64.9	18,147	17,549	14,159	2,071	37

1) Only portion from Lexington north is within 50 miles of state park but data are for entire county.
2) Only portion from Greensboro west is within 50 miles of state park but data are for entire county.

3) Only portion north and west of Graham is within 75 miles of state park but data are for entire county.
4) Only portion from Asheboro-Ramseur north is within 75 miles of state park but data are for entire county.

Sources: Statistical Services Center, Budget Division, Department of Administration: Profile North Carolina Counties - December, 1968.
State Planning Division, Department of Administration and Carolina Population Center, University of North Carolina: Estimates of the Population of North Carolina Counties 1968 and 1969.
Bureau of Employment Security Research, Employment Security Commission of North Carolina: North Carolina Work Force Estimates - 1969.
Bureau of Census, United States Department of Commerce, 1970 Census of Population (Information supplied by State Planning Division, Department of Administration).

REGIONAL CHARACTERISTICS

Access and Circulation

A network of highways make Pilot Mountain State Park readily accessible. U.S. Highway 52 running along the northeast boundary of the state park, and four laned from Winston-Salem, provides easy access. Interstate 40, carrying traffic from Greensboro and points east, and from Statesville and points west, connects with U.S. Highway 52 at Winston-Salem. N.C. Highway 268 connects Elkin with U.S. Highway 52 near the town of Pilot Mountain. When completed, Interstate 77 will connect with U.S. Highway 52 at Mount Airy via N.C. Highway 89.

Vehicular circulation between the Pilot Mountain and Yadkin River sections of the state park will be by way of Secondary Roads 2048, 2065, 2069, and 2072. It is very likely that the volume of traffic between these sections will be so heavy as to require improving Secondary Roads 2048, 2065 and 2069. Secondary Road 2072 will require improved alignment and paving.

Highway mileages between the state park and cities of over 10,000 are as follows:

City	Population 1970	Mileage
Burlington	35,930	67
Eden	15,871	54
Greensboro	144,076	46
High Point	63,204	40
Lexington	17,205	42
Martinsville, Va.	19,653	64
Reidsville	13,636	60
Salisbury	22,515	59
Statesville	19,996	61
Thomasville	15,230	41
Winston-Salem	132,913	21

North Carolina counties within 50 road miles (about an hours drive) of the state park are:

Davidson (portion from Lexington north)
Davie
Forsyth
Guilford (portion from Greensboro west)
Stokes
Surry
Yadkin

Counties within 75 road miles (about an hour and a half drive) of the state park are:

Alamance (portion north and west of Graham)
Alexander
Iredell
Randolph (portion from Asheboro-Ramsuer north)
Rowan
Wilkes

Population

The 1970 U.S. Census counted 700,000 North Carolinians within an hour's drive of Pilot Mountain State Park and more than one million within an hour and a half drive. Most of those within an hour's drive lived in two counties, Forsyth and Guilford, which together had a 1970 population of over 500,000. Almost 69% of the Forsyth County and more than 76% of the Guilford County population was urban in 1970.

Since 1950, every county within 75 miles of the state park has had substantial population increases. Between 1960 and 1968 all except one, Yadkin, had an average annual rate of increase greater than one per cent. Somewhat more than two-thirds of all the persons living in these counties in 1968 were under 45 years of age. This was also the case within each county but one, Rowan, in which slightly over one-third were 45 years old or older.

As a group these counties rank relatively high in the state in per capita income. In 1966 Guilford and Forsyth ranked second and third, and nine of the thirteen counties in the group ranked in the top twenty five. The 1969 civilian labor force average annual employment in these counties totaled 517,710 of which number 221,860 were employed in manufacturing and only 21,670 in agriculture. Farmland decreased by 190 square miles between 1960 and 1966 and agricultural workers dropped from 33,580 in 1962 to 21,670 in 1969 — a decrease of 11,910. Only in Stokes County is the work force predominately agricultural. Of the 6,150 workers in that county's 1969 labor force, 2,710 were agricultural workers, 1,550 fewer than in 1963. Surry County had the greatest number of agricultrual workers in 1969 of any county in the group, but these 3,390 workers represented less than 12% of the county's labor force.

These thirteen counties have undergone marked changes in population characteristics during the last twenty years, particularly in the ten year period 1960 - 1970. Major changes include increase in population, substantial increase in industrialization and manufacturing employment, substantial decrease of farmland and agricultural workers, increase in urbanization (and suburbanization), and increase in per capita income. Projections are that all these trends will continue.

In Virginia east of the Blue Ridge Parkway there are no towns with a population of more than 2,500 within 50 miles of Pilot Mountain State Park. The only Virginia town of more than 2,500 east of the Blue Ridge Parkway and within 75 miles of the state park is Martinsville.

Other Park and Recreation Facilities

Existing

The only publicly owned large natural park areas in the counties within 50 road miles of Pilot Mountain State Park are Hanging Rock State Park, the Cumberland Knob area on the Blue Ridge Parkway and Tanglewood Park.

Hanging Rock State Park affords opportunities for camping, hiking, swimming, boating, fishing, nature study and vacationing. It has already been developed to nearly its optimum capacity. Only if a large acreage is added to it can its public use facilities be materially increased.

Cumberland Knob provides opportunities for picnicking and hiking. No additional development of consequence is proposed.

Tanglewood Park is much more intensively developed than either Hanging Rock State Park or Cumberland Knob and further development is underway. Because of this, it is designated as a Class II, General Area in the *1968 North Carolina Outdoor Recreation Areas and Facility Survey,* whereas Hanging Rock State Park and Cumberland Knob are in the Class III, Natural Area category.

Proposed

No large publicly owned natural areas are currently proposed in Davidson, Davie, Forsyth, Guilford, Stokes, Surry or Yadkin Counties.

Recreation Needs

Based on a standard of 50 acres per thousand population, the *1968 North Carolina Outdoor Recreation Areas and Facility Survey* by the State Planning Task Force of the Department of Administration estimates outdoor recreation needs for Class III, Natural Areas, to be:

County	No. Acres Needed in 1970	1985
Davidson	4,908	6,220
Davie	886	966
Forsyth	11,383	16,774
Guilford	15,127	20,407
Yadkin	1,199	1,219

The need for Class III, Natural Areas, in Stokes and Surry Counties is considered to be met (in fact considerably exceeded) by Hanging Rock and Pilot Mountain State Parks.

On the basis of the above acreage estimates it is obvious that Pilot Mountain State Park is very much needed to overcome present deficiencies.

THE ROLE OF THE STATE PARK IN THE REGION

Pilot Mountain State Park plays not one, but several roles in the region it serves.

It adds more acres of land, more miles of hiking trails, more picnic tables, more camp sites, and so on, to the inventory of recreational land and facilities. It thus plays an active role in overcoming deficiencies in and meeting need for certain types of recreational land and facilities.

Of much greater significance is the role Pilot Mountain State Park plays in preserving the quality of the environment in the region. This it does by preserving and protecting for public use and enjoyment two of the major scenic features of the region – Pilot Mountain and a free flowing stretch of the Yadkin River – together with over 3000 acres of open space.

Another highly important role the state park plays is that of affording opportunities for the recreational use of natural resources and for recreation in natural surroundings. In a region becoming more and more industrialized and urbanized, this is a contribution of great worth.

Through interpretive programs and facilities, Pilot Mountain State Park affords opportunities for the study and appreciation of nature. In the field of formal education, it is an outdoor classroom for student and teacher. Thus the state park plays an important role in helping the layman understand something of his place in nature and nature's place in him, and plays a minor role in formal education.

The state park plays a role in portraying facets of the history of the region, especially of the way of life of earlier generations. In doing so, it keeps alive in our minds a part of our historical heritage.

In essence, the role of Pilot Mountain State Park is to enhance the quality of life in the region it serves.

DESCRIPTION OF THE RESOURCES

Land Area

Pilot Mountain State Park now contains a land area of 3540.518 acres in three sections — 2143.408 acres including and surrounding Pilot Mountain and 1397.11 acres in the section along the Yadkin River and the connecting corridor.

Natural Features

Geology

Pilot Mountain is formed by an erosion-resistant cap of more-or-less level bedded quartzite that has resisted erosion more than the softer surrounding rocks, chiefly gneisses and schists. This quartzite that caps the mountain also outcrops over the entire western and northern slopes west of Grindstone Ridge around to the long ridge running westward from the Little Pinnacle.

The rocks underlying the area around Pilot Mountain were originally laid down as sedimentary rocks, such as mudstones, siltstones, and sandstones, probably in the later Pre-Cambrian or early Paleozoic. These rocks were then metamorphosed, the finer grained rocks into gneisses and schists, and the sandstones into quartzite, during the early Paleozoic. This metamorphism was accompanied by considerable folding and deformation and the result is a rather complicated landscape. Long periods of uplift and erosion have occurred since the Paleozoic.

The lower slopes of the mountain are composed of colluvial material that has collected in fans at the base of the steeper upper slopes from which it has eroded. In addition, there are localized block fields in the draws and coves of the mountain slopes. These may have accumulated during Pleistocene glacial periods, when the climate was much colder and tree lines were lowered, permitting ice-wedging of rocks at high elevations. Similar block fields in the Great Smokies are explained in this way.

Vegetation

The following comments are drawn from an intensive study of the vegetation of Pilot Mountain proper done by Williams and Oosting (1944), the only study of its sort for the area.

The vegetation of Pilot Mountain is dominated by Chestnut oak (*Quercus prinus*) and thus has a distinct affinity with the vegetation of the Blue Ridge to the west. Chestnut oak, very uncommon in the eastern Piedmont, becomes progressively more common in low elevation stands as one approaches the Blue Ridge. It is typically the dominant on low, isolated monadnocks throughout the Piedmont, such as Hanging Rock and Pilot Mountain (Gibbon, 1966). Other typical mountain trees, such as Pitch pine (*Pinus rigida*), and Table mountain pine (*P. pungens*), and mountain shrubs, such as Rosebay rhododendron (*Rhododendron maximum*), Catawba rhododendron (*R. catawbiense*), Fetterbush (*Pieris floribunda*), Recurved fetterbush (*Leucothoe recurva*), and Sweetfern (*Comptonia peregrina*) are also common on Pilot Mountain.

Four major vegetation types are recognized as occurring on Pilot Mountain. These are:

a. *Chestnut oak - Pitch pine* community on the western half of the mountain and the upper south-facing slopes.
b. *Chestnut oak - Heath* community in the higher east and north-facing slopes.
c. *Oak-Hickory* forest at middle altitudes on the south and east-facing slopes and on the north-facing slopes below the Knob.
d. *Mixed Forest* at lower elevations on the same exposures on which Oak-Hickory forest occurs.

The basic structural and compositional features of each of these types are summarized in the following paragraphs.

Chestnut oak - Pitch pine community. This community occupies all of the slopes from Grindstone Ridge

westward around the mountain to the major ravine on the south. It also dominates the upper south-facing slope below the Knob above an altitude of 1800 feet. The canopy is open and the trees are stunted and of poor form. Chestnut oak and Pitch pine dominate the canopy layer. Other important trees are Scarlet oak (*Q. coccinea*), Table mountain pine and Virginia pine (*P. virginiana*). Chief understory species are Blackjack oak (*Q. marilandica*), Sourwood (*Oxydendrum arboreum*), and Black gum (*Nyssa sylvatica*). Chestnut oak and Blackjack oak are reproducing heavily whereas the pines are not. The community is dominated chiefly by mountain species; however, the presence of Blackjack oak gives the community an affinity with the Piedmont. The shrub layer is composed primarily of tree reproduction, Mountain laurel (*Kalmia latifolia*), and Huckleberry (*Gaylussacia baccata*) and is more dense on the north-facing slope and at the higher elevations within the community. Herbs are scattered throughout and are never particularly dense.

Chestnut oak - Heath. This community reaches its best development at the base of the Knob on the north-facing slope where it extends for some distance down a shallow ravine. It also occurs along both the east and north-facing slopes just below the Knob. The community appears as dwarfed, widely spaced trees above a dense layer of evergreen shrubs. The chief distinguishing feature is the dominance of a dense shrub layer of ericaceous species. Chestnut oak is the dominant tree species but it is replaced by pines where openings occur in the heath layer. The trees are largest at lower elevations but at the base of the Knob hardly exceed the shrubs in height. A greater number of Chestnut (*Castanea dentata*) sprouts is found in this community than in any other. Mountain laurel and Catawba rhododendron are the dominant shrubs, forming dense clumps and large thickets throughout the area. Where these shrubs are not so dense, Blueberries (*Vaccinium* spp.) and Bear oak (*Q. ilicifolia*) form dense clumps. Herbs are of little importance.

This community very closely resembles a similar community in the mountains. Whittaker (1956) reports a Chestnut oak - chestnut - heath community from the Smokies and other authors have described a forest type in which Chestnut oak and evergreen heaths are dominant (Cooper, 1963; Mowbray, 1966). This community, then can be regarded as a true disjunct from the mountains, containing no species typically Piedmont in distribution.

Oak-Hickory forest. This forest type occurs on the middle slopes of the eastern half of the mountain and in most ravines on all exposures. On the south-facing slope, at its lower limits, it grades abruptly into mixed forest at an elevation of about 1500 feet where there is an abrupt decrease in the steepness of slope near the toe of the mountain. On the eastern and northern sides of the mountain, this type extends downward from the Chestnut oak - Heath to the base of the mountain.

There is a greater variety of canopy species and a larger number of dominants in this type than in either of the upper slope types previously discussed. Although Chestnut oak and Black locust (*Robinia pseudo - acacia*) are the dominants, a number of other species are also important. Tulip poplar (*Liriodendron tulipifera*), White oak (*Q. alba*), Red oak (*Q. rubra*), and Hickory (*Carya tomentosa* and *C. glabra*) are common. Red oak is more common on the moister sites whereas White oak occurs where it is drier. The understory is dense and composed chiefly of reproduction of the dominant species. However, a number of true understory species occur, such as Dogwood (*Cornus florida*), Sourwood, Redbud (*Cercis canadensis*), and Mulberry (*Morus rubra*). Dogwood is generally more abundant in this community than is Sourwood. The shrub layer is not well developed and is

composed mostly of tree reproduction and woody vines. Grape (*Vitis* spp.) and Virginia creeper (*Parthenocissus quinquefolia*) are virtually confined to this community. The evergreen ericaceous species, so characteristic of the higher elevations, are virtually absent. Herbs are numerous and well-developed.

The composition of this community is similar to that of hardwood forests in the central Piedmont and near the mountains. The presence of White oak, Hickory, and Dogwood, plus the absence of an ericaceous shrub layer, indicates the clear Piedmont affinities of the community. However, the dominance of Chestnut oak clearly shows this community not to be the typical Oak-Hickory forest of the Piedmont described by Braun (1950) and Oosting (1942).

Mixed Forest. This forest type rings the base of the mountain on its eastern and southern sides. A great variety of tree species are found in the type, and in composition it is very much like the Oak-Hickory community. Chestnut oak is the dominant, with White oak, Hickory, and Virginia pine also important. Black oak (*Q. velutina*) and Black locust are major species and Blackjack oak and Post oak (*Q. stellata*) are components of the canopy in this type and in no other. Sourwood and Black gum are the chief understory species and Dogwood is present here as in the Oak-Hickory type. The shrub layer is discontinuous and composed chiefly of low Blueberry (*Vaccinium vacillans*) bushes. Herbs are scattered and are, in general, those of dry Piedmont forests. In terms of composition and structure, this type is clearly similar to forests of dry, open slopes in the upper Piedmont.

Other localized groups of species are found on the mountain. On the top of the Knob there is a relatively flat area. In the center, Chestnut oak is dominant, but toward the edges of the cliffs, it is replaced by Table mountain pine. Other species present are those of the Chestnut oak - Heath community. The shrub layer of the central area is dominated by ericaceous species, of which Fetterbush, Mountain laurel, Catawba rhododendron, and Blueberry (*Vaccinium corymbosum* var. *pallidum*) are most important. In crevices on the rock cliffs forming the sides of the pinnacles several species occur that are rarely found elsewhere on the mountain. Among these are Alumroot (*Heuchera parviflora*), Silverling (*Paronychia argyrocoma*) and Mountain spleenwort (*Asplenium montanum*).

The vegetation of the Yadkin River section of the park, and of the corridor connecting the mountain with the river, is typical of that found in the Piedmont. It is a mosaic of recently abandoned cultivated fields and older fields now grown up in pine woods. In the Yadkin River section, forest composition is similar to that described for other areas of the Piedmont. True Oak-Hickory forest (with little or no Chestnut oak) occurs over the upland sites. White oak, Scarlet oak, Northern red oak, Black oak, and several species of Hickory dominate the canopy. Southern red oak (*Q. falcata*), Red maple (*Acer rubrum*), and Black gum are scattered throughout. The understory is chiefly Sourwood with some Dogwood, Red maple and Black gum. The herb and shrub layers are sparse and are rich in species only in ravines and other protected sites. Along the river, typical flood plain vegetation is found. River birch (*Betula nigra*) and Sycamore (*Platanus occidentalis*) dominate the first bottom immediately adjacent to the river. Where the flood plain broadens there are extensive areas under cultivation. Forests of these areas contain Sweet gum (*Liquidambar styraciflua*), Tulip poplar, Ash (*Fraxinus* spp.) and various bottomlands oaks in addition to River birch and Sycamore. Pine forests of the area are almost exclusively pure stands of Virginia pine of varying age. These have developed in areas which were once cultivated fields. In areas where forests have been

heavily cut over and burned, mixed stands of pine and upland hardwoods occur.

Animal Life

Available information indicates that the animal life of the state park is not significantly different from that of the surrounding Piedmont. However, it is entirely possible that there may be animals on the mountain other than the common forms that might reasonably be expected there. For example, there may be some interesting finds among the salamanders, insects, or higher invertebrates in view of the similarity of the mountain environment to that of the Blue Ridge Province just to the west.

Water

There are no natural bodies of standing water in Pilot Mountain State Park. The dominant water feature is the Yadkin River into which all the streams eventually empty. Where it flows through the state park, the river is broad, shallow, full of riffles, divided by islands and, in places, easily crossed on foot. Portions of Grassy, Pilot and Horne Creeks, as well as several smaller streams flow through the state park.

Special Scenic Features

The dominant scenic feature is Pilot Mountain itself. Other main scenic features are the views from the mountain top, the Yadkin River, and the vegetation on the summit of Pilot Mountain. When in bloom, the Rhododendron and Mountain laurel present a fine display of scenic beauty.

Man Made Features

Man made features are scattered throughout the state park and vary from the faint traces of old roads to the glinting tracks of the railroad.

On the summit and lower north slope of Pilot Mountain are roads, buildings, ponds, a swimming pool and other developments constructed for commercial operation. Scattered throughout the rest of the Pilot Mountain section are farm houses of varying sizes, tobacco barns and other farm buildings. Almost all of these were served by wagon roads, many of them still clearly visible. The dominant man made feature is U.S. Highway 52 along the northeast boundary.

In the Yadkin River section there are some old farm buildings, the largest of which are on the old Hauser farm, and a number of old roads, or parts of old roads. Much more noticeable than these are the roads but recently bulldozed through the heart of this section of the state park. The railroad is by far the most dominant man made feature.

History

The resources of some historical importance are the Hauser farm, traces of old roads, the canal structures and the railroad. The farm is typical of the farms of the area in the late 1880's. The canal structures are all that remain of a river navigation plan. The railroad is a typical branch line.

Archaeology

The paucity of authenticated information on the archaeology of Pilot Mountain State Park and surrounding territory makes it impossible to give a definitive description of the archaeology of the area. It seems certain, however, that various Indian tribes frequented this area over a considerable period of time and it is possible that some of them lived in it. The tribes most likely to have been inhabitants were the Tutelo and the Saura (or Cheraw.)

EVALUATION OF THE RESOURCES

Adequacy of Land Area

With the additions recommended under *Land Acquisition* the land area will be adequate.

Quality of Natural Features

Geology

Pilot Mountain is a classic monadnock, and thus an excellent example of such a geologic feature. Because of its isolation, it illustrates vividly the role of differential rates of erosion, and uplift in developing a landscape. In this respect it is, perhaps, more dramatic than Hanging Rock to the east in the same mountain range. The geology of Pilot Mountain is, therefore, outstanding though not unique.

The geology of the rest of the state park is typical of the upper Piedmont uplands and river bottoms.

Vegetation

The vegetation of the state park has been badly disturbed by fire and the activities of man, evidence of which is everywhere abundant. On Pilot Mountain the vegetation has suffered burning and timbering. In the Piedmont Plateau portion the land has been cleared, cultivated and cut over. The river bottoms and the islands have been cleared and cultivated. Despite this, there are pleasant second growth woodlands and interesting vegetation in the state park.

The vegetation on Pilot Mountain is of more than usual interest because it illustrates the differential effects of several environmental factors on forest types. The fact that the mountain is vegetationally an outlier of the Blue Ridge is of biological interest. Several species (*Pieris floribunda,* for example) are typical Blue Ridge species and their occurrences in the Piedmont are limited to monadnocks such as Pilot Mountain. Bear oak *(Quercus ilicifolia),* a scrubby species of more northern distribution, is quite rare in North Carolina. The forest east of Little Pinnacle and at the summit contains a number of ericaceous species and has a sort of wild beauty. In many ways it is the most interesting vegetative type on the mountain.

The vegetation below the toe of Pilot Mountain and in the river section of the state park is typical of that now found in the Piedmont. Typical flood plain vegetation occupies the river bottoms but the islands have been cleared and are in cultivation. The best examples of true Oak-Hickory forest are on the ridges of the Yadkin River section.

Animal Life

There are insufficient data upon which to base an evaluation of animal life.

Water

The Yadkin River is the most important and valuable water feature. Where it flows through the state park it creates the impression of a natural river little impaired by man. Its values are indeed significant and should be zealously guarded.

The stretches of creeks and branches within the state park are typically Piedmont except that they appear to run clearer than most Piedmont streams. Pilot Creek has a very attractive rocky reach within the state park.

Quality of Scenic Features

Its form and isolation make Pilot Mountain a unique scenic feature. The overwhelming scenic feature is, however, the general view from the summit of the pastoral landscape stretching in all directions. On clear days, the view is enhanced by sight of the Blue Ridge Mountains in North Carolina and Virginia.

The scenic values of the Yadkin River are excellent. Here it is not heavily loaded with silt and is more attractive than many Piedmont rivers to the south.

Quality of Man Made Features

Most of the man made features have little to commend them. All buildings except the Hauser farm buildings, buildings needed as temporary storage and maintenance buildings, and houses needed for temporary or permanent quarters should be removed. The old swimming pool should be broken up and filled in. The most useful feature is the paved road to the summit which, with some relocation and improvement, should be retained.

Historical Significance

No events of state-wide significance per se took place in the state park. No structures of special architectual merit are within the state park, nor none connected with events of state-wide importance or persons outstanding in the history of North Carolina.

There are, however, structures and other products of man's handiwork important to the portrayal of the interpretative theme. These are the Hauser farm and its buildings, traces of old roads, the canal structures and the railroad.

Archaelogical Significance

Though lack of authoritative information precludes an evaluation of the significance of the archaeology of the state park and the general area in which it is located, there is little doubt that the story of the Indians can be a very interesting part of the interpretetive program after adequate archaeological research has been done.

Potential for Recreation Use

Pilot Mountain State Park is well suited for recreational use of natural resources and outdoor recreation in natural surroundings. Its natural attributes offer excellent potential for such recreation as picnicking, boating, fishing, swimming, camping, hiking, horseback riding, nature study and sightseeing.

This potential is not, however, limitless, but must be realized with careful planning and ecological sensitivity.

FACTORS AFFECTING RESOURCES AND USE

Surrounding Use

Use of the land surrounding the state park varies from suburban residential to agricultural.

The Pilot Mountain section is circumscribed by roads and a highway. Traffic on busy four laned U.S. Highway 52 along the northeast boundary is heavy and noise from it is a distracting factor near the highway. Secondary Road 2048 parallels the west and southwest boundaries at distances of 1000 to 3000 feet. Secondary Road 2061 lies along the eastern half of the south boundary.

Where it parallels the park, Secondary Road 2048 is lined with residences. Between these and the park boundary lie open cultivated fields interspersed with a few small patches of trees.

Highway traffic dominates the northeast boundary.

To the south and north, agriculture is the predominant land use.

In all likelihood, land use around the perimeter of the Pilot Mountain section of the state park will become more and more residential and commercial and less and less agricultural as the years pass.

The Yadkin River section of the state park is surrounded by farmland and woodland. This situation is likely to continue for some years to come.

Land use along the corridor connecting the Pilot Mountain and Yadkin River sections, and in the countryside between the two sections, is agricultural.

Park Boundaries

Considering existing surrounding use, the park boundaries now established are quite good but some additions are necessary for optimum development.

Climate

Climate at Pilot Mountain State Park is typical of the upper Piedmont — moderate with humid summers and mild winters. Damaging storms are rare. The occasional thunderstorms accompanied by lightning and high winds usually are short lived.

Temperature

Temperature records are from the United States Weather Bureau 70 year record for Mount Airy, North Carolina which has an elevation of 1090 feet. Temperature at the state park will closely approximate that at Mount Airy except that on the upper slopes and summit of Pilot Mountain it may be slightly lower.

Month	Average Maximum	Average Minimum
January	49.3	27.6
February	51.6	28.3
March	59.7	34.4
April	70.0	42.2
May	78.7	51.0
June	85.3	59.5
July	87.6	63.4
August	86.2	62.4
September	81.8	56.1
October	71.6	43.8
November	59.7	33.9
December	50.2	27.7

Maximum Recorded: 105° July 14, 1954
Minimum Recorded: −9° December 13, 1967

Percipitation

Rainfall averages about 44 inches a year. Very little snow falls and what does generally lasts but a few hours. Occasionally snow lies on the ground for a day or two, rarely more than three days.

The rainfall records given below are for the 30 year period 1931-60 at Winston-Salem. The snowfall records are for the 65 year period ending in 1960 at Mount Airy Rainfall and snowfall at the state park would be about the same as indicated by these records.

Month	Average Rainfall	Average Snowfall
January	3.68	2.9
February	3.48	2.4
March	4.01	1.9
April	3.62	0.1
May	4.01	Trace
June	3.64	0
July	4.63	0
August	4.31	0
September	3.55	0
October	3.07	0
November	2.78	0.2
December	3.35	2.1

Average annual rainfall:	44.13 inches
Average annual snowfall:	9.6 inches
*Maximum 1 hr. rainfall:	3 inches
Maximum 24 hr. rainfall:	6.24 inches Oct. 15, 1954
Maximum 24 hr. snowfall:	18 inches Dec., 1930
Maximum snowfall in 1 mo.:	21 inches Dec., 1930

*Statistically computed for a 50 year period.

During the 40 year period ending in 1968, Greensboro averaged 66% of all possible sunshine in summer, and 50% in winter. Averages at the state park would vary very little from these.

Wind

The following from weather records (1929-1959) at Greensboro are indicative of wind conditions at the state park:

Season	Direction	Average Velocity
Winter	SW	9
Spring	SW	10
Summer	SW	8
Fall	NE	8

The maxiumn velocity recorded was 63 miles per hour from the north in July, 1932.

Fire History

Until the mid-thirties, it was the local custom at Eastertime to set fires on the slopes of Pilot Mountain. These annual burns varied in size and severity, but all were damaging.

During the years 1948 through 1969, there were only six fires. Two were caused by hunters, two by smokers, and two by lightning. The hunter caused fires were the most damaging, one in 1960 burned three acres and one in the fall of 1961 burned 14 acres. The remaining fires burned less than an acre each and were mostly ground fires in fallen leaves.

Very few fires appear to have occured in the farms around the foot of Pilot Mountain or in the Yadkin River section of the state park. What fires there were in the river section were usually caused by hunters or fishermen.

There appear to have been no building fires in the area now included in the state park.

The usual fire seasons are from mid-February to mid-May and from mid-October through mid-December.

Terrain

Pilot Mountain, rising abruptly almost 1500 feet above the surrounding Piedmont Plateau, is the dominant relief feature of the state park. The summit consists of two distinct caps of quartzite, called the Big and Little Pinnacles. Ridges run down the mountain from the Pinnacles almost like the spokes of a wheel. Between these are draws and coves, the largest of which lies immediately east of Grindstone Ridge on the northern flank of the mountain. The lower slopes are relatively gentle, but about half-way up break and become markedly steeper. The peak and slopes of Pilot Mountain occupy more than 1000 acres.

The flatest land and lowest elevations in the state park are in the flood plain of the Yadkin River between the railroad right-of-way and the river, and on the river islands. Next flattest and lowest is land along Grassy Creek.

The remainder of the land within the state park is undulating with elongated relatively flat-topped ridges.

The numerous streams and drainageways separating these ridges make the upland areas well drained. The upper slopes of Pilot Mountain are classed as excessively drained.

Soils

The soils in and around Pilot Mountain State Park were mapped before detailed geologic information became available.

The soils on Pilot Mountain are in the Stony Rough Land soil association group. The Hartsells series, here derived from the underlying quartzites, is found over virtually the entire mountain, reflecting weathering in place and on colluvium derived from quartzite. Soil of the lower slopes of the mountain is Hartsells stony fine sandy loam, while the steep phase of this soil occupies the upper slopes. In the Cumberland Mountains of Tennessee and Alabama, where it is much more common than in North Carolina, the Hartsells series is derived chiefly from sandstones. In North Carolina, where it is not at all common, it is confined to areas of quartzite and is stony and highly siliceous. Where it is well developed on the lower slopes of Pilot Mountain, this soil is characterized by a thin surface veneer of forest litter. It has a shallow, grayish brown fine sandy loam A1 horizon, below which there may be a discontinuous lighter A2 horizon. The yellow subsoil varies in texture from a fine sandy loam to a sandy clay. The solum varies in depth from 15 to 48 inches. Generally, the deeper soils are on the lower slopes in situations where colluvial material from above has accumulated. On the steep upper slopes the soil is very thin and poorly developed and rock ledges are common. The soils are stony throughout with scattered angular fragments of quartzite common on the surface and throughout the profile. Although no data are available on chemical status, it can be inferred from topography and soil texture that the soils of Pilot Mountain are probably sterile and infertile, with relatively low amounts of exchangeable bases and a very low base saturation. Surface run-off on these soils is rapid to very rapid depending upon slope gradient. Internal drainage is medium to slow.

Their nature makes Hartsells series soils particularly vulnerable to damage from heavy public use. Facilities must, therefore, be designed and managed so as to minimize the impact of public use on these soils.

The river flats are composed of Congaree fine sandy loam, a common Piedmont bottom land soil, brown to reddish brown in color, deep, and friable. The soil of the creek beds is Congaree silt loam or a Congaree material known as Meadow. These soils are well drained but subject to flood.

In the remainder of the state park the soil association is Hayesville-Cecil. In general, this soil is mapped as one of several phases of the Cecil series. Cecil soils are common wide-spread Piedmont soils with sandy loam to loam top soils and red or yellowish red moderately firm to firm clay subsoils. The various phases of the Cecil series are determined chiefly by the texture of the surface soil. On the interstream divides of the uplands, where erosion has been most severe, the mixed phase is found. Here, the top soil is often missing and the soil at the surface is darker, redder, and heavier in texture than the fine sandy loam phase found on the lower slopes. Localized areas of Cecil loam with a finer textured topsoil occur. These soils generally range from 24-35 inches deep over weathered rock material. Surface run-off is medium to rapid. Internal drainage is medium.

Detailed soil surveys on two areas near the southern boundary of the Pilot Mountain section of the state park reveal a predominance of Appling sandy loam and Appling gray sandy loam.

In terms of fertility, the Cecil and Congaree series both can be expected to have a higher base status and higher fertility than the Hartsells series. Cecil soils on lower landscape positions, such as ravine slopes, and the Congaree soils are probably the most fertile in the entire state park.

Optimum Public Use Capacity

Because of its proximity to large centers of population, Pilot Mountain State Park will receive heavy use, especially after public use facilities are developed. In the

long run, management problems are, therefore, much more likely to be concerned with obviating the ill effects of excessive public use than with promoting increased use.

The type and extent of development is a major factor governing the type and extent of use. Too intensive development, development aimed solely at providing facilities for the greatest possible use, can only result in excessive damage to natural features, particularly to such vulverable features as the thin soils on the steep slopes of Pilot Mountain. This, in turn, can only result in lowering the quality of the park users outdoor experience. On the other hand, too little development tends to unduly restrict volume of use.

What must be achieved is optimum public use, that volume of use which falls just short of appreciable disturbance of or damage to ecology and natural features, and which is not great enough to perceptibly lower the quality of the park users experience. There are no formulas by which optimum public use can be pinpointed. Determining it is largely a matter of judgement based on experience and observation.

In arriving at a judgement on the optimum public use capacity of Pilot Mountain State Park, the planners have weighed and considered the character and quality of existing natural features and ecology, land management programs, appropriate public uses, effects of public use on similar areas, probable patterns of use within the state park, and measures to prevent or remedy disturbance of and damage to the ecology and the natural features. The physical improvements recommended in the General Development Plan and the Developed Area Schematics, coupled with the management programs recommended, would, in the judgement of the planners, provide optimum public use of Pilot Mountain State Park.

Appropriate Public Uses

Of equal importance with determining optimum public use capacity is determining what are appropriate public uses. By definition, appropriate public uses are those which are in keeping with the purpose for which the state park was established and which do not appreciably disturb or damage the ecology and natural features.

Public uses of Pilot Mountain State Park which conform to this definition are listed below. They fall into four categories, and each category embraces several uses. Many uses are interrelated. Hiking, for example, may be closely involved with enjoyment of scenery and nature study.

Enjoyment of Scenery and Natural Features:

- Sightseeing
- Photography
- Sketching and Painting

Recreational Use of Natural Resources:

- Picnicking
- Swimming
- Boating
- Fishing
- Hiking
- Horseback Riding
- Camping

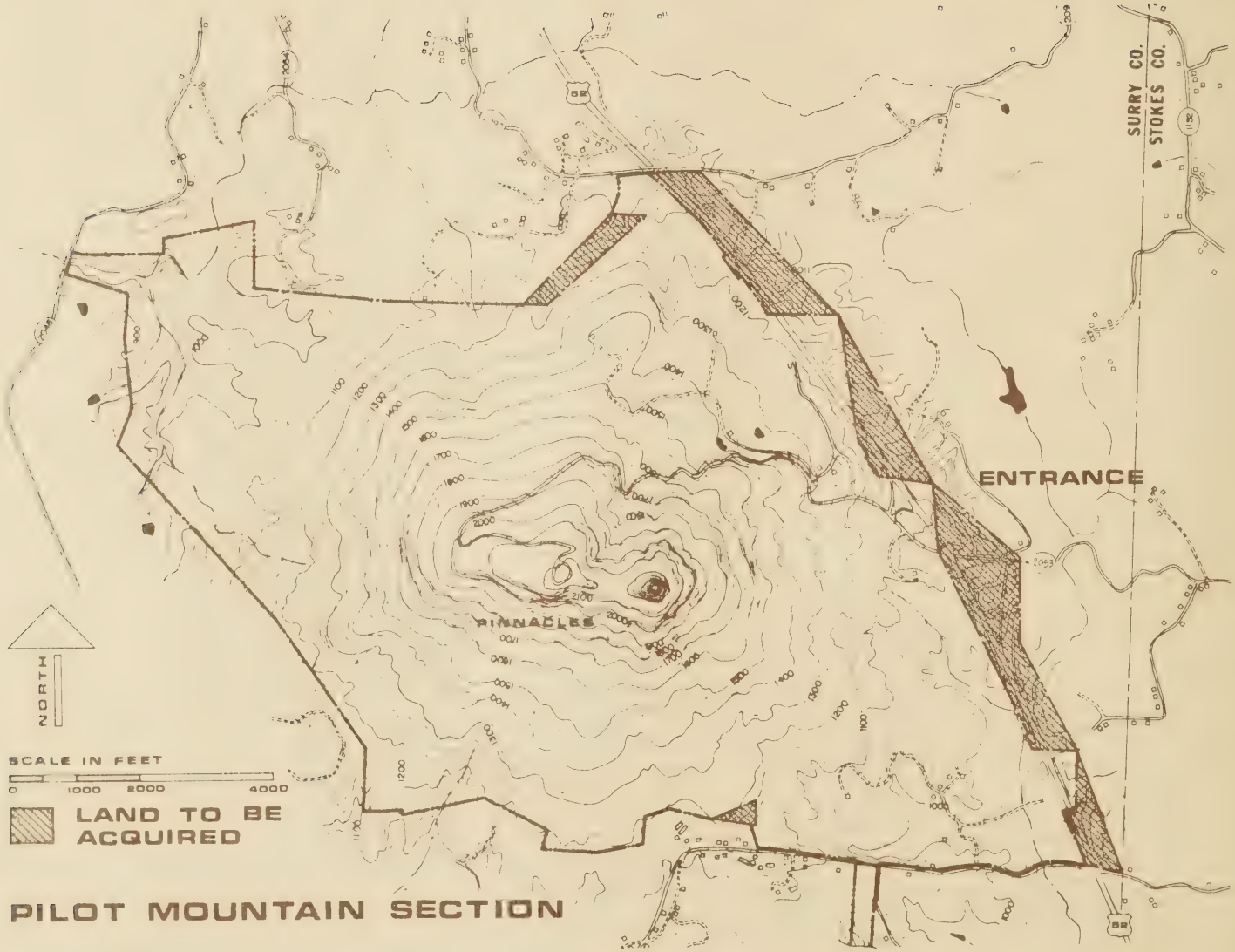
Nature Study and Education

- Park operated interpretive programs
- Self-conducted activities (group or individual) such as:
  - Bird watching
  - Animal watching
  - Plant identification
- Teacher conducted field trips for students

Study and Enjoyment of Historic Features

- Park operated interpretive programs
- Self-conducted visits and tours
- "Browsing"
- Teacher conducted field trips for students

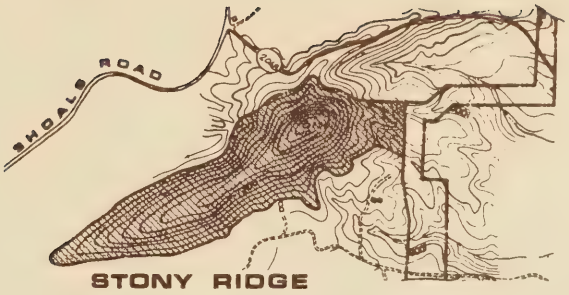
THE PLAN

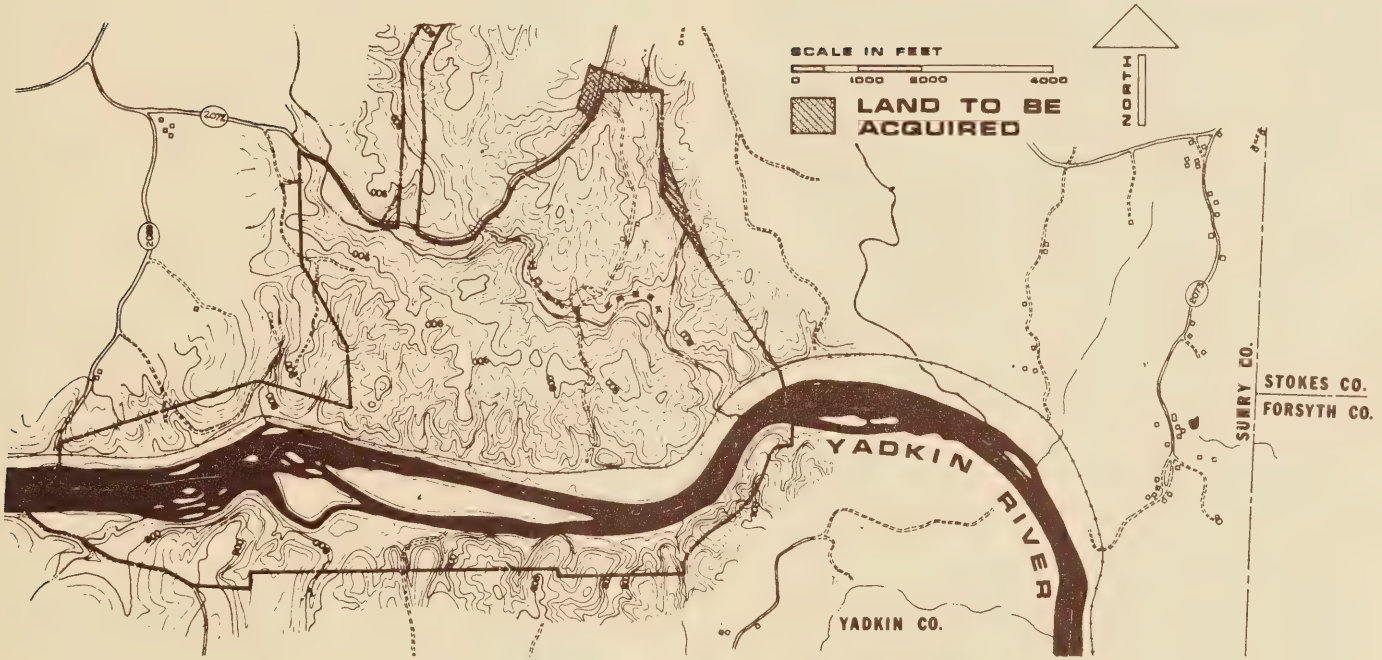


PILOT MOUNTAIN SECTION

RIGHT: CORRIDOR

BELOW: RIVER SECTION





LAND ACQUISITION

Additional land acquisition is necessary to protect key points from encroachment detrimental to the state park, to provide essential buffer zones and to acquire Stony Ridge which is required to make the Corridor a more useful recreation unit. The importance of this land acquisition cannot be overemphasized. It should be undertaken at once.

The additional land needed to complete the state park is shown on the land acquisition plans on the facing page and above.

RESEARCH

Documentary research and intensive field investigation are prerequisites for both the interpretive program and the management of natural resources. The research and field investigation that now appears necessary is discussed below. As this work progresses, it may reveal the need for other research.

Natural Resources

Immediately needed for an interim interpretive program are detailed check lists of the plants and animals now living in Pilot Mountain State Park.

Considerable research and field investigation must be accomplished to produce data for the interpretive program on the theme *Man's Impact on Ecology* and for the natural resources management program. The following two research projects should be undertaken simultaneously:

Project aimed at determining the composition of the forest existing prior to the advent of the white man.

Project aimed at determining the animal life supported by this forest.

The following research projects should be correlated with the above projects:

Project to produce a detailed record of the changes made or caused by man, including those attributable to his inadvertent introductions such as the chestnut blight.

Project to determine the influence on forest types of soil, differently oriented slopes, man's activities and other pertinent factors.

Project, using the data produced by the above two projects, to determine the successional story.

History

Documentary and physical research should be undertaken to produce the information needed to:

Reconstruct the history of the Hauser farm, especially the history of land use.

Restore the Hauser farm to its 1885 condition.

Produce the information required to interpret and portray the agriculture of the 1880's with specific reference to the crops raised on the Hauser farm and the farming and land management practices in use there.

Reconstruct the history of road and highway transportation in the general vicinity of Pilot Mountain State Park.

Restore or reconstruct portions of old roads.

Reconstruct the history of attempts to use the Yadkin River for transportation.

Stabilize the remains of canal structures.

Reconstruct the history of railroads in the general vicinity of Pilot Mountain State Park.

The results of the above research should be recorded on historic base maps and in appropriate reports.

Archaeology

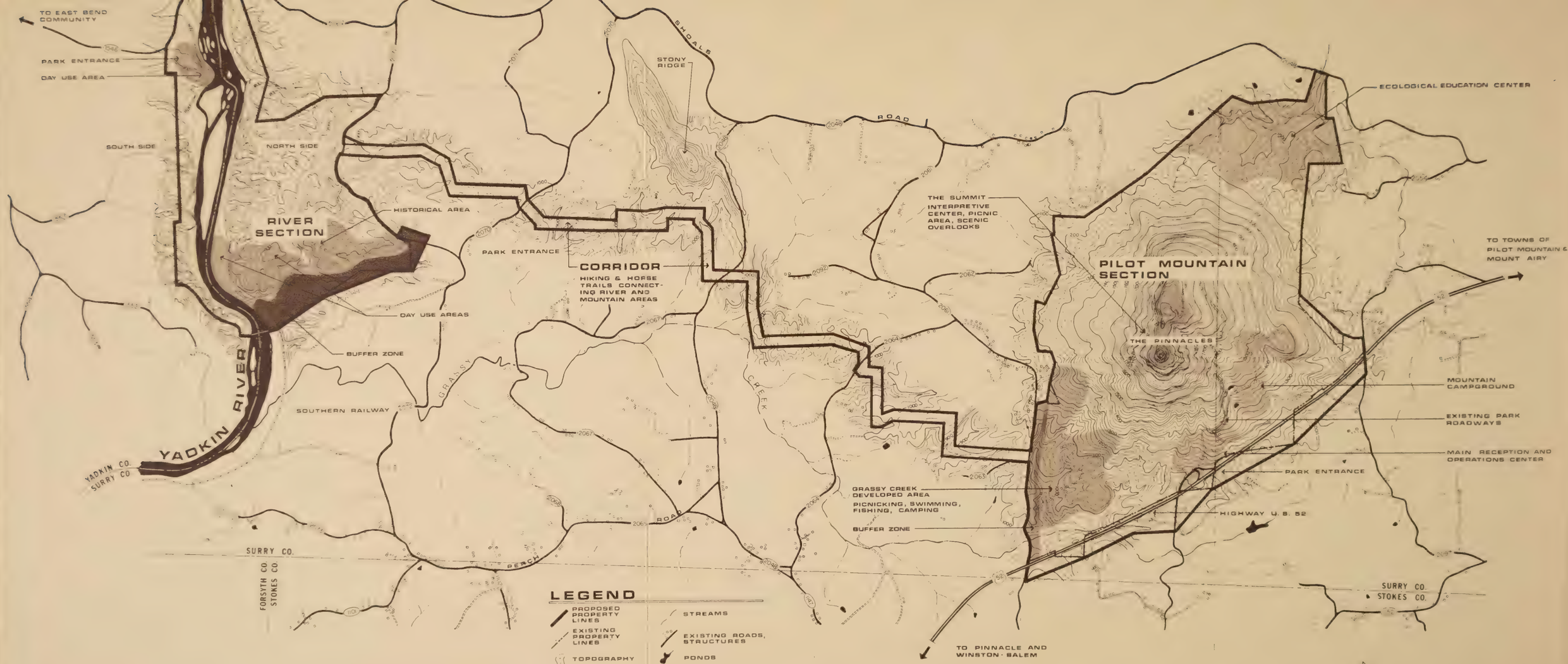
Documentary and physical research should be carried out to determine:

Which, if any, Indian cultures made use of the area now within Pilot Mountain State Park, what the uses were, and where they took place.

Whether or not any important events involving Indians occurred within the confines of the state park.

If there are sites in the state park where there may be Indian artifacts. If such sites exist appropriate physical research should be done on them.

The results of the above research should be recorded on archaeological base maps and in appropriate reports.



GENERAL DEVELOPMENT PLAN

PARK DEVELOPMENT

Controlling Factors

The basic factors controlling development of the state park for public use are the purpose of the state park and the factors on which this purpose is based, namely, *the Principles Governing the Establishment, Extension and Development of the State Park System of the State of North Carolina* and the natural qualities and features of the state park itself.

In essence, these controlling factors demand that all development be so planned and designed that its construction and use will cause the very least possible damage to and disturbance of natural and scenic resources. At the same time, these factors demand that development be adequate to provide for optimum public use and enjoyment of the resources of the state park.

Development Concepts

Pilot Mountain State Park is far from being an undisturbed natural area. This and its close geographic relationship to large concentrations of population tend to make it at present tempting to emphasize certain types of public use and de-emphasize natural resources and ecology. Long range planning must, however, take into account the potential for establishment of natural ecological conditions and must not advocate developments that would hamper the realization of this potential. This concept has guided the design of the General Development Plan and the Developed Area Schematics.

Another basic development concept is to consider Pilot Mountain State Park as consisting of a major area with two satellites because the Pilot Mountain and Yadkin River sections are more than five miles apart by road and the Yadkin River section is divided into two sections by the river.

Roads make the major impact on natural conditions. To minimize this impact, roads have been kept to the minimum required for access to major developments and maximum use has been made of existing roads.

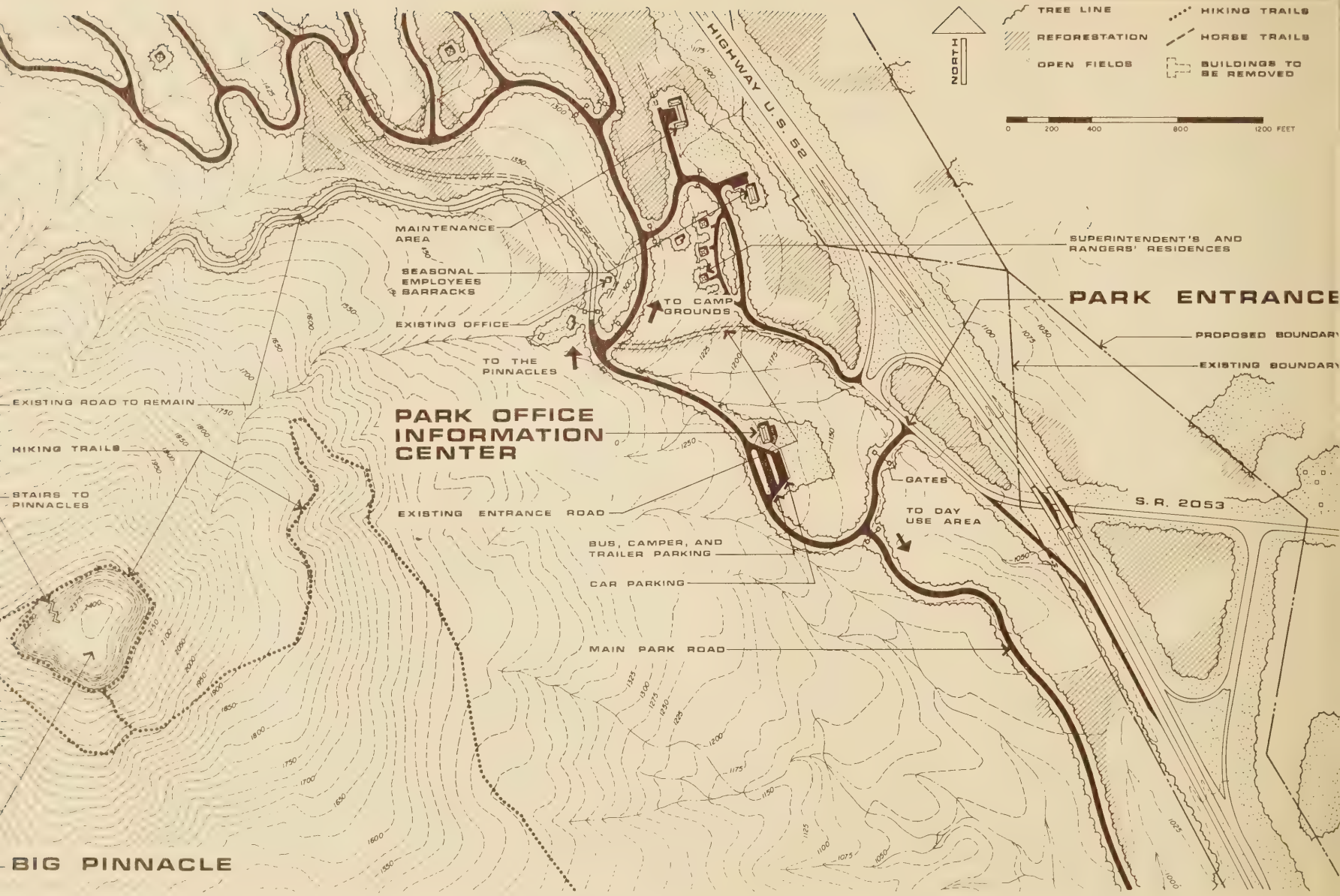
Topography, happily, has permitted the location of all major developments on sites where natural conditions have been severely altered. The largest developments have been placed near the state park boundary to further lessen their impact on natural features.

The Pilot Mountain section is treated as the major section and contains the major developments. In it are four developed areas: The Summit, Mountain Campground, Grassy Creek Developed Area, and Ecological Education Center.

An important feature of the Yadkin River section will be the historical resources — the Hauser farm, old roads, the remains of canal structures — and their interpretation. Major emphasis is placed on enjoyment of scenic and natural resources through hiking, horseback riding, boating, canoeing and "roughing it". Other developments are kept simple and provide only for limited vehicular access and picnicking.

Despite the fact that it was acquired as a buffer area to protect the scenic values of the river (this purpose has already been partially frustrated by construction of a high tension transmission line) there will inevitably be some use of the south side of the Yadkin River section. It appears advisable, therefore, to provide facilities to accommodate and control this use.

The development shown herein provides for optimum public use of Pilot Mountain State Park and is, therefore, the maximum that should be undertaken. Most facilities, particularly those which have a major impact on natural features such as parking areas and campgrounds, are so planned that they can be constructed in stages as required by volume of public use. Areas designated as "future picnic areas" and "future campgrounds" would be built only if justified by demand.


LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
HIKING TRAILS
HORSE TRAILS
BUILDINGS TO BE REMOVED
0 200 400 800 1200 FEET
NORTH
HIGHWAY U.S. 52
MAINTENANCE AREA
SEASONAL EMPLOYEES & BARRACKS
EXISTING OFFICE
TO THE PINNACLES
TO CAMP GROUNDS
SUPERINTENDENT'S AND RANGERS' RESIDENCES
PARK ENTRANCE
PROPOSED BOUNDARY
EXISTING BOUNDARY
EXISTING ROAD TO REMAIN
HIKING TRAILS
STAIRS TO PINNACLES
PARK OFFICE INFORMATION CENTER
EXISTING ENTRANCE ROAD
BUS, CAMPER, AND TRAILER PARKING
CAR PARKING
MAIN PARK ROAD
GATES
TO DAY USE AREA
S.R. 2053
BIG PINNACLE

MAIN RECEPTION AND OPERATIONS CENTER

Entrance Road

In its original location, the entrance road created hazardous traffic conditions during periods of heavy use. To correct this, and to provide ample room for the park office and information center, the entrance road is relocated between Secondary Road 2053 and the old entrance gate.

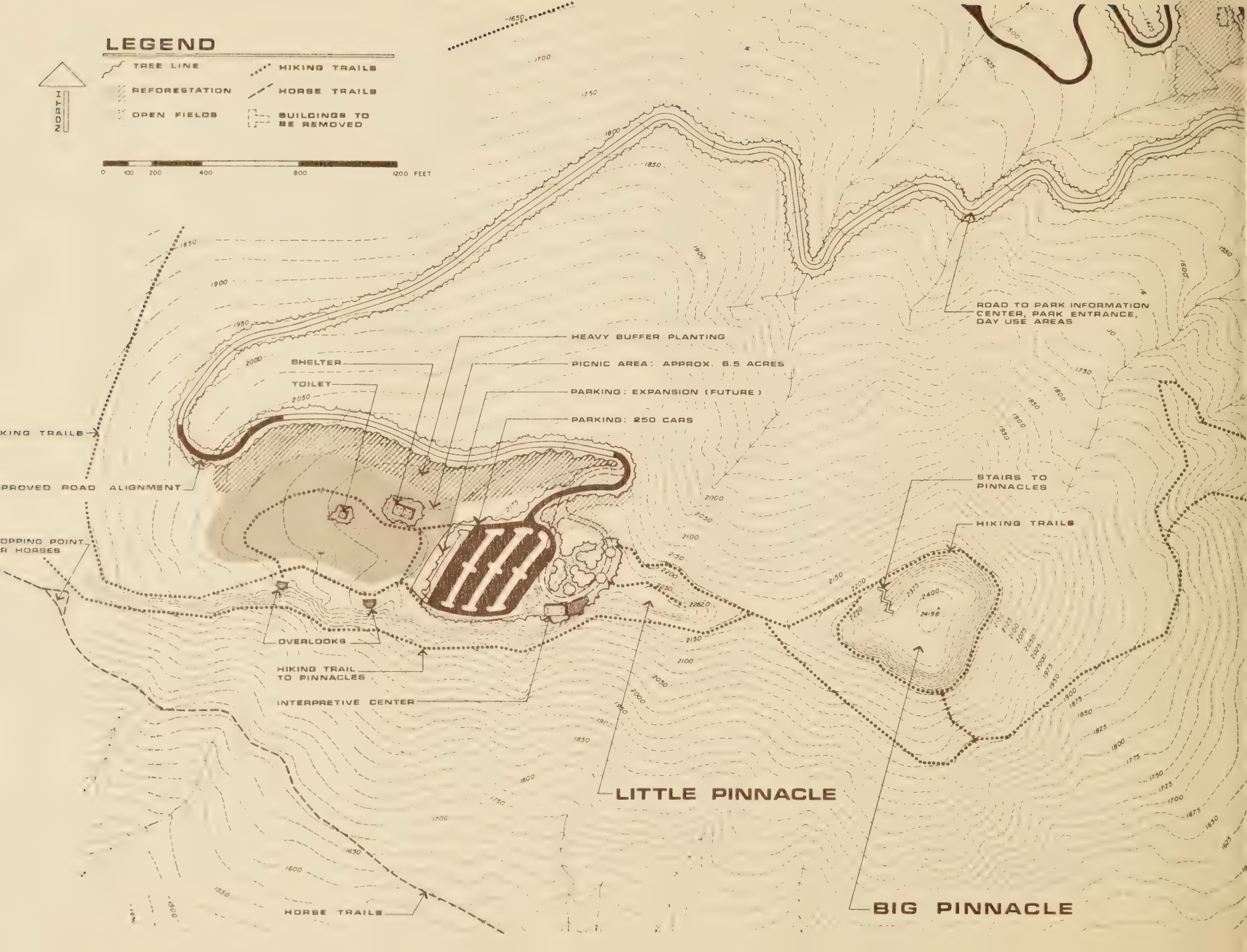
A control point in the form of an entrance gate is located on the entrance road about 200 feet from its junction with Secondary Road 2053.

Park Office and Information Center

This dual purpose building houses the main park office, the information center with its displays, and public toilets. It is served by a parking area.

Residences and Maintenance Center

Access to the residences, seasonal employees' barracks, and maintenance center takes off from a point outside of the entrance gate. Occupants of the residences and their guests thus have access to residences without having to cope with locked gates. The maintenance area can be closed off with gates without interferring with access to the residences. This is the main maintenance center for the entire state park and includes workshops, garage, and storage buildings.


LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
HIKING TRAILS
HORSE TRAILS
BUILDINGS TO BE REMOVED
NORTH
0 100 200 400 800 1200 FEET
ROAD TO PARK INFORMATION CENTER, PARK ENTRANCE, DAY USE AREAS
HEAVY BUFFER PLANTING
PICNIC AREA: APPROX. 6.5 ACRES
PARKING: EXPANSION (FUTURE)
PARKING: 250 CARS
SHELTER
TOILET
KING TRAILS
PROVED ROAD ALIGNMENT
OPPING POINT R HORSES
STAIRS TO PINNACLES
HIKING TRAILS
OVERLOOKS
HIKING TRAIL TO PINNACLES
INTERPRETIVE CENTER
LITTLE PINNACLE
BIG PINNACLE
HORSE TRAILS

THE SUMMIT

The summit of Pilot Mountain, from which are seen the views that are the state park's foremost scenic resource, is accessible by means of the road built before the state park was established. Improvements to this road consist of widening, easing the two curves nearest the summit and roadside improvement. The 250 car parking area is located in an open field and serves all summit facilities.

The interpretive center is placed in the summit area so as to relate it visually with the pinnacles and the views and thus make them living exhibits. Wayside exhibits and trailside signs supplement the interpretive center exhibits.

The picnic area is located in the woods west of the parking area and is developed with a series of table groups (as at Hanging Rock State Park) to minimize the impact of public use. In this location, picnicking activities do not conflict with enjoyment of views and walks to the pinnacles.

Trails, improved and adequately furnished with signs and wayside exhibits, provide access to Little and Big Pinnacles and to overlooks around the perimeter of the summit area. These trails are connected with the overall hiking trails system. The bridle trail is terminated well below the summit at a point from which the riders can reach the top on foot.

LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
HIKING TRAILS
HORSE TRAILS
BUILDINGS TO BE REMOVED
NORTH
0 200 400 800 1200 FEET
S.R. 2097
PROPOSED BOUNDARY
EXISTING BOUNDARY
PROPOSED BOUNDARY
YOUTH ORGANIZATION OVERNIGHT CAMPING (TEMPORARY)
EXISTING BOUNDARY
HIGHWAY U.S. 52
GRINDSTONE RIDGE
CAMP WASH HOUSES
TENT AND TRAILER CAMPGROUNDS
APPROX. 215 SPACES
GATES
EXISTING ROAD TO REMAIN
ROAD TO PARK INFORMATION CENTER, PARK ENTRANCE, DAY USE AREAS

MOUNTAIN CAMPGROUND

This is the largest campground development in the entire state park. Fully developed, it will provide over 200 campsites.

Access to it is provided by a road which takes off from the main park road about a fourth of a mile beyond the information center. This road also provides access to the Ecological Education Center.

The area in which it is located contains some of the best second growth hardwood forest in the state park, the topography lends itself to campground development, and the location provides privacy and is well removed from the activities of the day use areas.

The campground consists of five sections which may be built one by one as demand arises. The southeast section might be one of the last developed since it now (1970) contains some open fields.

ALTERNATE SCHEME WITH POOL

GRASSY CREEK DEVELOPED AREA

This developed area includes facilities for day use, family camping, and youth organization overnight camping. Several factors make this part of the state park especially suitable for these purposes. This location permits early separation of traffic to it from traffic to the summit. The lake and all parking areas are on land which was farmed as late as 1968, so their construction and use is neither damaging to the ecology nor detrimental to long range ecological management. On the other hand, the main picnic area and the campground are in second growth hardwood forests.

The 20.5 acre lake is a major feature of the Grassy Creek Developed Area. Although Grassy Creek is the largest stream in the area, it has several drawbacks as a lake site. It is impossible to protect the stretch of Grassy Creek within the state park from pollution because so much of its water-shed lies outside the state park. Another drawback is that a lake on Grassy Creek would lie parallel to and very close to busy U.S. Highway 52. A tributary wholly within the state park and further removed from U.S. Highway 52 was, therefore, chosen as the lake site. Here, topography and tree growth will combine to screen the lake from Secondary Road 2061.

Presently available data (1970) indicate that volume of stream flow and water quality are such as to make the lake suitable for swimming. A bathhouse, refreshment stand, beach and protected swimming area are therefore proposed on the shore of the lake. A boat house will provide boat and electric motor rentals and other facilities for boating and fishing. A 250 car parking area will serve these facilities.

Should subsequent data from long term weir readings and testing of water samples show the lake to be unsuitable for swimming, a pool at least 50 meters long with adjoining bathhouse, wading pool, refreshment stand, and sunbathing area, will provide facilities for swimming. Use of the lake will be confined to boating and fishing with a boathouse, where boats and electric motors may be rented, providing facilities for these uses. A 300 car parking area will serve both lake and swimming pool.

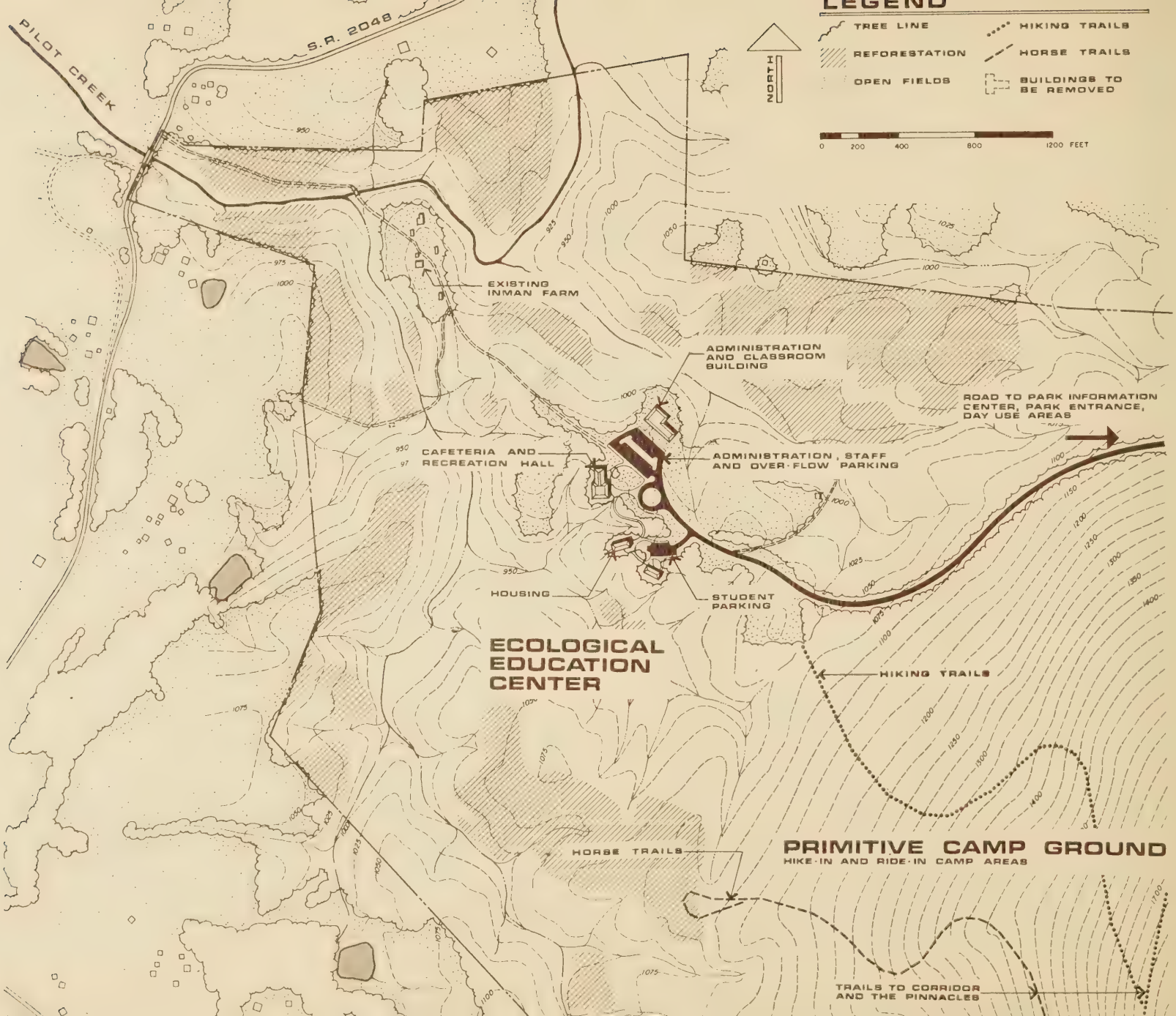
The picnic area northwest of the lake is located mostly in second growth hardwoods that will increase in quality and attractiveness under protection from fire and cutting. It is served by a 170 car parking area. The "future" picnic area, to be developed at a later date and then only if needed, is located in an area now (1970) partly in second growth hardwoods, partly in mixed pine-hardwood second growth, and partly in open fields which will in time revert to woods. This picnic area would be served by a 100 car parking area.

The tent and trailer camp ground is in two sections and has a capacity of about 85 sites. It is so designed that it can be developed in two stages if desired. To give it privacy, it is located beyond all day use areas.

The youth organized camp grounds are for overnight and weekend camping by such supervised organized youth groups as Boy Scouts. The facilities provided are primitive.

The entrance point to the northern end of the corridor is located in the southwest corner of this developed area. Here, an underpass provides safe access to the foot and bridle trails in the corridor and parking for horse trailers is easily accessible from Secondary Road 2061. This point also connects with the trail systems in the Pilot Mountain section of the state park.

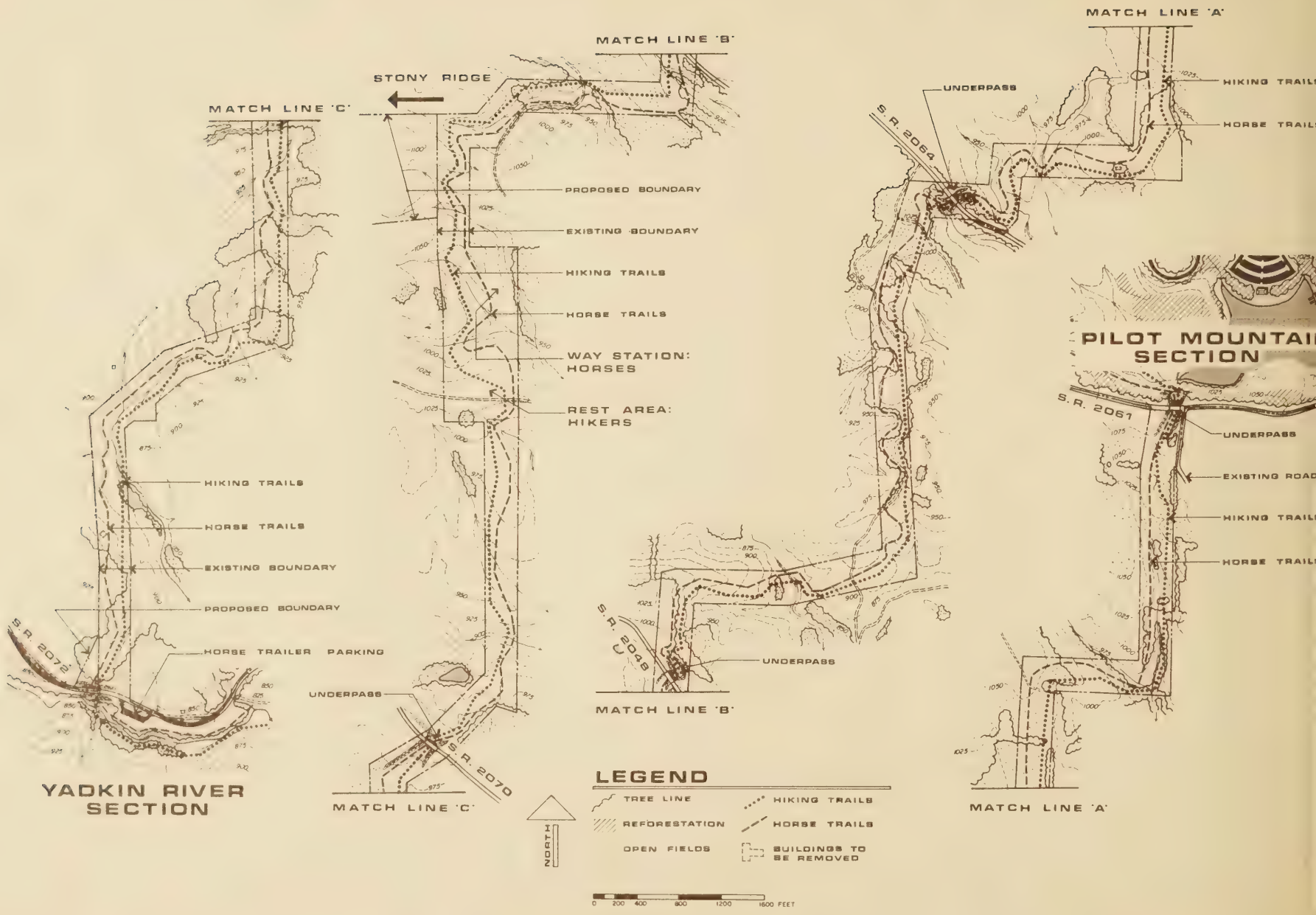
A chain link fence along Secondary Road 2061 protects the developed area from trespass and controls access to the corridor trails.


LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
HIKING TRAILS
HORSE TRAILS
BUILDINGS TO BE REMOVED
0 200 400 800 1200 FEET
NORTH
PILOT CREEK
S.R. 2048
EXISTING INMAN FARM
ADMINISTRATION AND CLASSROOM BUILDING
ROAD TO PARK INFORMATION CENTER, PARK ENTRANCE, DAY USE AREAS
CAFETERIA AND RECREATION HALL
ADMINISTRATION, STAFF AND OVER-FLOW PARKING
HOUSING
STUDENT PARKING
ECOLOGICAL EDUCATION CENTER
HIKING TRAILS
HORSE TRAILS
PRIMITIVE CAMP GROUND
HIKE-IN AND RIDE-IN CAMP AREAS
TRAILS TO CORRIDOR AND THE PINNACLES

THE ECOLOGICAL EDUCATION CENTER

Its combination of natural resources and proximity to school systems in heavily populated cities and counties makes Pilot Mountain State Park an excellent place for teaching ecology, especially man's relation to and effect on other members of the ecological community. The Ecological Education Center provides the facilities required for this purpose and is suitable for year-round use by adults and college students as well as school children. The Center is especially well adapted for use as an ecological training center for public school teachers.

The site on which the Center is located gives it a high degree of privacy. Access is provided by a road extending from the mountain campground access road.


MATCH LINE 'C'
STONY RIDGE
MATCH LINE 'B'
MATCH LINE 'A'
PROPOSED BOUNDARY
EXISTING BOUNDARY
HIKING TRAILS
HORSE TRAILS
WAY STATION: HORSES
REST AREA: HIKERS
HORSE TRAILER PARKING
UNDERPASS
S.R. 2072
S.R. 2070
S.R. 2064
S.R. 2048
S.R. 2061
EXISTING ROAD
YADKIN RIVER SECTION
PILOT MOUNTAIN SECTION
LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
BUILDINGS TO BE REMOVED
NORTH
0 200 400 800 1200 1600 FEET

THE CORRIDOR

The hiking and bridle trails running the length of the corridor connect the two sections of the state park. While a way station for horseback riders and a rest area for hikers are provided about midway of the corridor, the major recreational development is on Stony Ridge where rather extensive opportunities for hike-in and ride-in camping are provided.

Underpasses at secondary road crossings protect park users from road traffic. Access at these points is controlled by fencing.

LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
HIKING TRAILS
HORSE TRAILS
BUILDINGS TO BE REMOVED
NORTH
0 200 400 800 1200 1600 FEET
PROPOSED BOUNDARY
EXISTING BOUNDARY
S.R. 2072
GATE
RESIDENCE
SEASONAL EMPLOYEES BARRACKS
CORRIDOR
SECONDARY MAINTENANCE AREA
PARKING 120 SPACES
ACCESS ROAD TO RIVER
UNDERPASS
CORRAL AND GRAZING AREA
TRAILS TO CORRIDOR AND THE PINNACLES
HORSE TRAILER PARKING
IMPROVED ROAD ALIGNMENT
OLD ROAD BETWEEN HAUSER FARM AND RIVER FIELD
BRIDGE
HORNE CREEK
FUTURE OVERPASS
FORDING POINT IN RIVER
HIKING TRAIL ALONG RIDGE
SHELTER
TOILET
HIKING TRAIL ALONG RIVER
HIKE-IN CAMP GROUND
PICNIC AREA
PARKING 110 CARS
PARKING 50 CARS
UNDERPASS
GRADE CROSSING
SOUTHERN RAILWAY
PARKING 135 SPACES
PICNIC AREA
BOAT LAUNCHING
HIKE-IN BOAT-IN CAMP GROUND
HORSE TRAIL ALONG RIVER
POWER LINE RIGHT OF WAY

YADKIN RIVER SECTION - NORTH SIDE

To minimize interference with ecological management goals, major development is concentrated along the east boundary.

The park road provides access to the Hauser farm and terminates in parking areas serving the picnic areas. Parking areas to serve the Hauser farm are located outside the area of historical interest.

There are two picnic areas, one in the woods on high ground and one in the river bottom. The upland picnic area is developed similarly to picnic areas in the Pilot Mountain section. Because it is in the flood plain, there are no permanent structures in the lower picnic area. Shelter, toilets and picnic tables are all demountable so they can be quickly removed if threatened by flood.

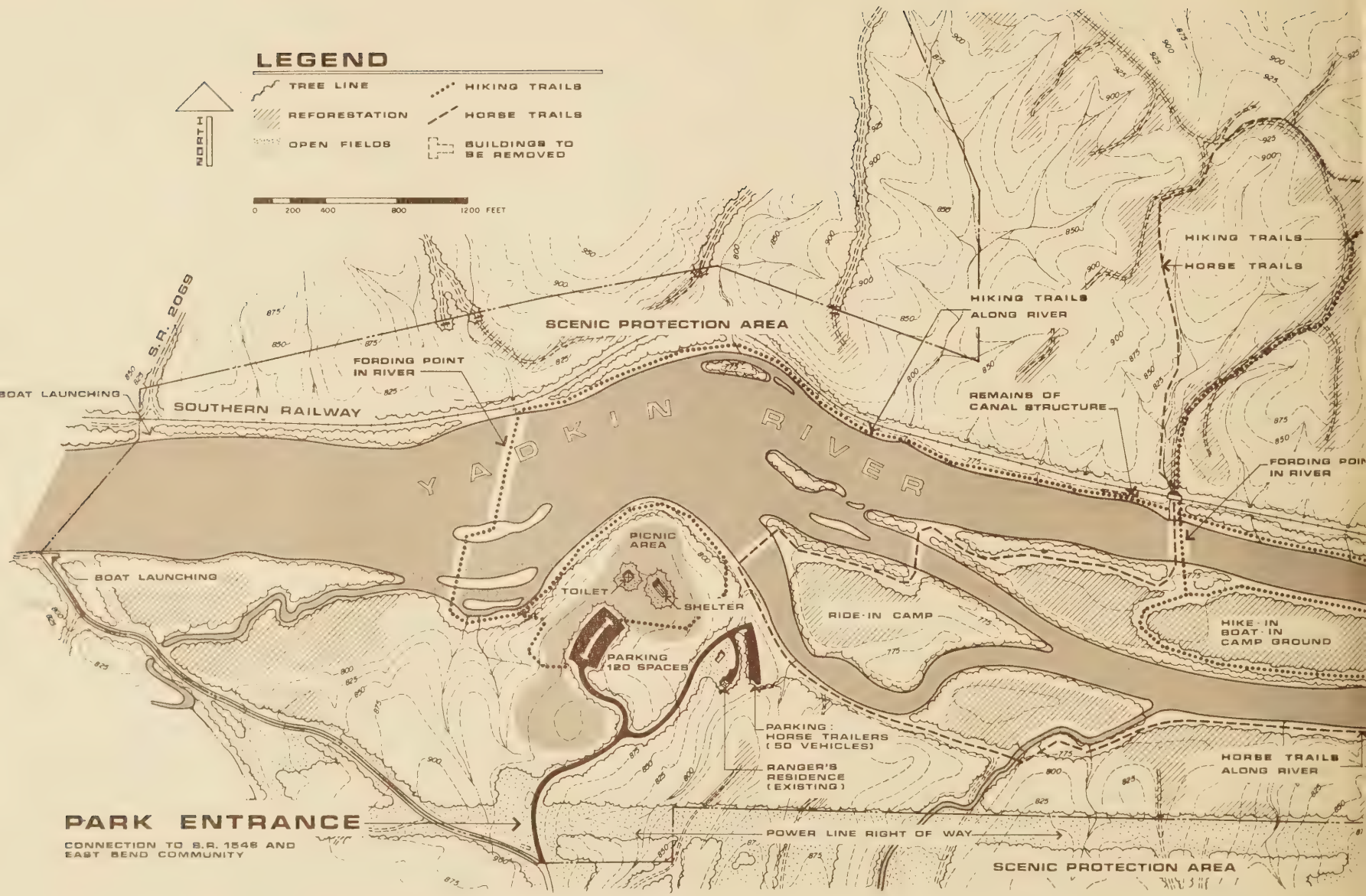
The hiking and bridle trails are part of the overall trail system. Parking for horse trailers is provided near the south end of the corridor. Access to the corridor is provided by an underpass and controlled by fencing.

Hike-in camping areas are provided on the north side of the river, ride-in camping areas are provided on the south side of the river, and hike-in, ride-in and boat-in campgrounds are provided on the islands.

The boat launching site at the end of Secondary Road 2069 is provided and maintained by the Wildlife Resources Commission.

In addition to the interpretive exhibits at the Hauser farm, wayside exhibits near the canal structures and the railroad interpret the transportation story.

The park ranger's residence and secondary maintenance area are located so as to be accessible outside the control point.


LEGEND
TREE LINE
REFORESTATION
OPEN FIELDS
HIKING TRAILS
HORSE TRAILS
BUILDINGS TO BE REMOVED
NORTH
0 200 400 800 1200 FEET
S.R. 2069
SCENIC PROTECTION AREA
FORDING POINT IN RIVER
BOAT LAUNCHING
SOUTHERN RAILWAY
YADKIN RIVER
HIKING TRAILS
HORSE TRAILS
HIKING TRAILS ALONG RIVER
REMAINS OF CANAL STRUCTURE
FORDING POINT IN RIVER
PICNIC AREA
TOILET
SHELTER
PARKING 120 SPACES
RIDE-IN CAMP
HIKE-IN BOAT-IN CAMP GROUND
PARKING: HORSE TRAILERS (50 VEHICLES)
RANGER'S RESIDENCE (EXISTING)
HORSE TRAILS ALONG RIVER
PARK ENTRANCE
CONNECTION TO S.R. 1546 AND EAST BEND COMMUNITY
POWER LINE RIGHT OF WAY
SCENIC PROTECTION AREA

YADKIN RIVER SECTION - SOUTH SIDE

The simple development in this area is confined to its western end and the islands. Public use facilities are an access road, a parking area, a picnic area, parking for horse trailers, a boat launching site, and foot and bridle trails. A ranger's residence and secondary maintenance area complete the development.

On the islands, only trails and ride-in and walk-in campgrounds are provided.

UTILITIES

Electrical power is readily available from Duke Power Company lines in and adjacent to the state park. All power lines in the state park are to be underground.

Telephone service is readily available from the Surry Telephone Membership Corporation. All telephone lines in the state park are to be underground.

Water for the various developed areas (campgrounds, picnic areas, residence and maintenance areas, etc.) will be supplied from deep wells. Raw water for the swimming pool (if it is built) will be drawn from the lake. The pool would have its own water treatment plant and recirculation system.

Sewage disposal for the various developed areas would be by septic tanks and tile fields or by similar means.

TRAILS

Trail locations indicated on the master plan drawings are, of necessity, general and not specific. The exact locations for all hiking and horseback trails should be determined on the ground in accordance with usual standards and procedures.

Fire trail locations are to be made with the assistance of the Division of Forestry. Fire trails should be combined with horse trails to the maximum extent possible.

RELATED PUBLIC DEVELOPMENT

A magnificent outdoor recreation resources complex could be created by connecting Hanging Rock, Pilot Mountain and Stone Mountain State Parks (and possibly the Blue Ridge Parkway) with a state parkway and with a corridor containing hiking and horse trails. Such a recreation resource complex would be a major tourist attraction as well as a highly significant recreation resource.

Still another outdoor recreation resource could be preserved for public use by designating a substantial stretch of the Yadkin River between Elkin and Winston-Salem as a wild river. The lower portions of the Little Yadkin and Ararat Rivers and of Grassy Creek might well be included in this designation.

It is entirely likely that the secondary roads serving the various sections of Pilot Mountain State Park will become entirely inadequate for the traffic they will bear. The Division of State Parks and the State Highway Commission should, therefore, cooperate in preparing plans for the improvement of these roads.

It is recommended that the above proposals be implemented.

RELATED PRIVATE DEVELOPMENT

There is excellent opportunity for private development on private land of such recreational facilities as campgrounds, riding stables and float trips to supplement state park facilities. The Division of State Parks should take the lead in encouraging such developments to be of high quality and to render first class service.

The entire area surrounding Pilot Mountain State Park should be carefully zoned to prevent deterioration of the environment in the vicinity of the state park and to protect property values. The Division of State Parks should work closely with Stokes, Surry and Yadkin County authorities to achieve this.

SERVICES TO PARK USERS

Visitor Protection and Law Enforcement

The importance of providing for park user protection and maintaining law and order cannot be overemphasized. Unremitting attention must be given to this phase of park administration.

Visitor Protection

Major Hazards. The pinnacles and cliffs of Pilot Mountain present a major hazard to the park user because of the possibility of falls from them. This hazard should be coped with in two ways: (1) by designing and constructing public use facilities (walls, trails, steps, overlooks, etc.) so that they eliminate the possibility of accidents to the greatest extent possible, and (2) by training and equipping the state park staff for speedy rescue operations.

Water—in pool, lake and river — presents another major hazard. The water safety programs so effectively practiced in the North Carolina State Parks should be carried on at Pilot Mountain State Park with such refinements and adaptations as are required by local conditions.

Emergencies and First Aid. All permanent members of the staff and key summer personnel (life guards, naturalists, e.g.) should be properly and thoroughly trained in first aid and emergency operations, and should be given refresher training at least annually.

Good working relationships should be established and maintained with rescue squads, hospitals, and other medical services in the area.

Law Enforcement and Traffic Control

Enforcement of the state park regulations and traffic control are and will continue to be the major law enforcement activities.

The plan for park development includes such basic aids to law enforcement and traffic control as a single controlled entrance to each section of the state park, interior control of vehicular access to use areas and points of interest, parking areas adequate for optimum public use, and provisions for personnel to live in the state park.

Besides the quite effective law enforcement and traffic control measures customarily carried on in the North Carolina State Parks, special emphasis should be given at Pilot Mountain State Park to: (1) a law enforcement and traffic control training and retraining program for all permanent personnel with major responsibilities in these fields, (2) systematic patrolling including foot and horseback patrol of the corridor and river front, and (3) close coordination and cooperation with the State Highway Patrol, the Sheriffs of Surry and Yadkin Counties and nearby local law enforcement agencies.

Information

The following services should be rendered to orient the park user and to make readily available to him information on the facilities and services provided for his use and enjoyment.

Approaches

Highway signs should provide adequate directions for reaching the state park. Distance signs (for example: Pilot Mountain State Park 10 miles) should be erected at five mile intervals on U.S.Highway 52 between Winston-Salem and the state park and between Mount Airy and the state park. Approach signs should be placed a mile from and on each side of the park entrance (for example: Pilot Mountain State Park Exit 1 Mile) and appropriate signs should be placed at the point of exit.

Distance signs should be erected along N.C. 268 at

five mile intervals for 10 or 15 miles before its junction with U.S. 52 and appropriate exit signs should be placed at the junction.

Adequate distance and directional signs should be provided along the secondary roads connecting the Pilot Mountain and Yadkin River sections of the state park.

Primary Orientation

At the major orientation and information center near the park entrance, there should be displays (especially maps) and information folders to tell the park user what there is to see and do in the state park, what facilities are available, where they are and how to reach them, what the fees and charges are, current programs and events and other pertinent information. All should be designed to effectively serve the park visitor either with or without an attendant present.

An information and orientation point should also be provided near the entrance to the Yadkin River section. This could take the form of an unmanned exhibit shelter. Here, specific information on the river section and general information on the park as whole should be provided.

Information points should be provided at each end of the corridor to provide information concerning it.

On Site Information

Information on layout, location of facilities, fees, regulations and so forth, should be provided on bulletin boards in campgrounds and other developed areas.

Signs

Signs will be required to provide park users with directional and regulatory information. A detailed overall sign plan should be prepared to insure adequate but not excessive signing. Special attention should be given to signing trails.

Personal Contact

Park personnel are a major source of information for the park visitor. Personnel should therefore be fully informed on all matters pertaining to the state park and should be prepared to give accurate directions for reaching nearby towns and points of interest.

Interpretive Services

A comprehensive interpretive program is required to implement and supplement the physical facilities proposed in the General Development Plan. This program should include, in addition to natural history, the story of the Indians who once used through the Sauratown Mountains, portrayal of late nineteenth century farm life as it was lived in the region, and, at least in broad outline, the history of transportation as it relates to the local area.

It is essential that an interpretive prospectus, a sign and wayside exhibit plan, and a museum exhibits plan be prepared to provide detailed plans for this comprehensive interpretive program. The following recommendations are made to guide the preparation of the necessary detailed plans.

Interpretive Theme

The first step in planning an interpretive program is the selection of an interpretive theme. The interpretive theme proposed for Pilot Mountain State Park is *Man's Impact on Ecology.* This theme is applicable to both the natural history and history phases of the interpretive program. It should be developed in a way that will give the park user a basic awareness of ecology and of ecological problems caused by man.

Interpretive Devices

Natural History. The major set of interpretive devices will be the exhibits in the park museum. These should expound and illustrate the interpretive theme as it relates to Pilot Mountain State Park and environs. Other exhibits should explain the geological history of Pilot Mountain, and how the geology gives rise to the soil and, in turn, vegetation.

Wayside exhibits should be provided as required for

on site interpretation. One of these should tell the story of the Yadkin River. Self-guiding trails and walks, complete with the requisite trailside exhibits and signs should be constructed. Self guiding trails from the park museum to the pinnacles and cliffs should be the first built.

Printed matter is an important interpretive device. Self guiding trail leaflets, and handbooks and booklets on birds, plants, geology and other natural features should be prepared for public use.

History. The Hauser farm restored to the condition it was in at some appropriate specific time (say 1885) will be the major historical exhibit. At the farm, carefully designed exhibits and signs should be used to explain and portray such facets of farm life of the period as farm implements and tools, live stock, and a day (or a week) in the life of a typical farm family. The exhibits and the interpretation should also illustrate the impact of agriculture on ecology.

The remnants of old roads, the remains of canal structures and the railroad right-of-way are the visible signs of transportation history. This history should be portrayed through wayside exhibits dealing with roads, the canal and the railroad. Segments of old roads and the remaining canal structures should be preserved.

Booklets and other printed material dealing with the farm and the local history of transportation should be prepared.

Personal Services

An audio-visual program based on the interpretive theme and including both natural history and history should be a major feature at the park museum. This program should be very carefully planned and prepared to make it a truly meaningful experience for those who see and hear it.

Besides the usual conducted trail walks and hikes and campfire programs, there should be special children's programs at elementary and high school levels and demonstrations at the Hauser farm. The special children's programs should relate to the interpretive theme. Properly done, they can be an important part of environmental education. Demonstrations at the Hauser farm should include demonstrations of the use of farm implements and tools, kitchen utensils, and of major farm and household activities.

Qualified part time help can do much to strengthen the state park interpretive program. The park superintendent, and those employees he designates, should seek out members of nearby school, college, and university faculties who are qualified in subjects pertinent to the interpretive program to determine their interest in helping to carry it on. Definite arrangements for participation in the interpretive program should be made with those who are interested in assisting. The same procedures should be followed with private individuals and members of nature study, bird, hiking, and similar clubs and with members of local historical societies.

Recreation Programs

In an area such as Pilot Mountain State Park, interpretive programs largely supplant organized and supervised recreation programs.

There should, however, be a definite program to emphasize such recreational uses of natural resources as hiking, walk-in camping, river boating and canoeing, and bird watching. One effective way of doing this is through city and county park and recreation departments. These can promote and assist the organization of hiking, camping, canoeing, bird and similar clubs and provide programs to teach them skills in these activities. The state park staff should encourage local park and recreation departments to carry on such programs and, as far as possible, assist them in doing so.

The state park staff should also directly aid the type of clubs and organizations mentioned (and others such as horseback riding clubs) to plan use of the state park.

MANAGEMENT PROGRAMS

Protection of Property

By protection of property is meant protection of forest, fields and buildings from fire and vandalism. The Division of State Parks has an excellent record of protecting the state parks, and the recommendations given below are re-emphasis of the major practices set forth in the Division's *Administrative Manual.*

General

Keep all boundaries of Pilot Mountain State Park clearly marked.

Maintain systematic patrolling by uniformed personnel.

House the Superintendent and at least four Park Rangers in the state park.

Fire Control

Institute positive fire prevention measures for forest, fields and buildings.

With the assistance of the Division of Forestry, prepare a written forest fire control plan.

Provide the tools and equipment required by the forest fire control plan.

Give complete training (and periodic retraining) in forest fire prevention and forest fire fighting to all state park personnel.

With the assistance of the Department of Insurance, prepare a written fire control plan for all buildings.

Provide the fire fighting tools and equipment required by the building fire control plan.

Give complete training and periodic retraining in building fire prevention and fire fighting.

Establish and maintain cooperative agreements with the Division of Forestry and local fire departments.

Establish and maintain good cooperative relationships with adjoining state park neighbors.

Vandalism

It is recommended that the instructions given in the section on vandalism in the Division of State Parks *Administrative Manual* be followed.

Maintenance

Unremitting effort and adequate maintenance facilities, tools, and equipment are required to achieve the objective of maintaining Pilot Mountain State Park in first class condition. The needed facilities are shown on the General Development Plan and Developed Area Schematics. As the maintenance buildings are constructed, they should be adequately equipped and stocked with necessary tools and equipment.

All routine maintenance and minor repairs should be performed by the park staff. Major repair jobs should be handled under Raleigh Office direct supervision or by contract.

Detailed planning is the key to efficient maintenance. Therefore, a master maintenance program should be prepared and thereafter updated annually. From this an annual maintenance program should be prepared at the beginning of each fiscal year.

Natural Resources

Ecological

The ideal might be to so manage natural resources as to recreate the conditions existing before the white man appeared on the scene. The extermination of the chestnut by blight, and the eradication of several species of animals, to mention only two things, make this impossible.

The practical and attainable goal is to so manage natural resources as to permit, and perhaps encourage,

the establishment of the types of ecological communities that would have naturally occurred following the extinction of chestnut. Recommendations aimed at achieving this goal follow.

Vegetative Cover

A vegetative type map of the entire state park should be prepared immediately.

Protection is the major management practice presently required for vegetative cover. Extreme care should be taken to protect the vegetation at the summit between and around Big and Little Pinnacles both for the beauty of its ericaceous species and for the protection it provides for the summit.

Besides fire control, disease and insect control may be necessary. While patrols are being made, a careful watch should be kept for any sign of disease or insect infestation. Periodic inspections should be made for the specific purpose of detecting signs of disease or insect attack. If needed, corrective measures should be taken without delay, *but extreme care should be exercised to assure that no corrective measure is harmful to other forms of life.*

Cutting of any vegetation whatsoever should be confined to that necessary for construction and operation of public use facilties, for control of disease or insect infestations, or to maintain certain relatively rare types of vegetation. It may prove necessary, for example, to control or remove tree growth to maintain growths of rhododendron.

Soil aeration, fertilization and other remedial practices may be necessary where soil and vegetation is being, or has been, damaged by extremely heavy public use.

All exotic plants should be eradicated except where retained in connection with historic resources.

Except on the river islands, reforestation, or any planting other than for landscaping or historic restoration, should be deferred until the research recommended earlier is completed, and undertaken then only if the research indicates a need for it. The river islands should be planted with indigenous species at an early date. The process of old field sucession should be permitted to take place wherever it is planned to replace fields with woodland.

Only plants indigenous to the specific site in which they will be placed should be used in landscaping except in connection with historic restoration.

Consideration should be given to maintaining examples of old field succession for interpretive purposes. If done, each stage of succession up to young pines should be maintained on a small tract.

Animal Life

As with vegetation, protection is the major management practice presently required for animal life. Effective forest fire control will provide protection from fire, but animal life must also be protected from man and his animals. Frequent patrols should be made and active measures taken to detect and apprehend violators of the state park regulations concerning animal life. These regulations should be enforced strictly.

It is recommended that no stocking be done prior to completion of the research recommended in this Master Plan, and then only if research finding indicates a need for it.

No control of predators should be undertaken.

Water

All streams in the state park should be protected from pollution to the greatest extent possible. The Yadkin River and Grassy Creek are subject to pollution from sources outside the state park, but at least pollution from sources inside the state park can be avoided.

Except as proposed in this Master Plan, stream courses should not be dammed or altered in any way. The stretch of the Yadkin River in the river section should be kept in its free flowing state and remain free from structures of any sort.

Geological and Scenic Features

The major requirements in management of geological and scenic features are fire control, protection from vandalism, and careful design and construction of the facilities provided for public use and enjoyment of these

features. Fire control and protection from vandalism should be given continuous concentrated effort. Trails, stairways, overlooks and other public use facilities should be as inconspicuous as possible and be so designed that both their construction and their use create the least possible damage and disturbance of natural conditions.

Historical and Archaeological Resources

Historical

Buildings and structures are first order interpretive devices. There are in Pilot Mountain State Park two sets of structures of sufficient importance to be included in the interpretive program — the Hauser farm buildings and the canal structures. All of these should be stabilized and "moth-balled" immediately and later repaired and restored. All old roads in the Yadkin River section should be stabilized and protected from further damage.

After restoration, it will be necessary to furnish the Hauser farm buildings as they were furnished in the late 1880's. The farm should be tooled and equipped to the same period. The entire farm-buildings, grounds, roads, fields (or at least one or two nearest the house) — should be maintained as they would have been during the late 1880's. All should be done in strict compliance with the Historic Base Map. It may prove feasible to have the fields farmed and maintained under agricultural permits.

All old roads relating to the transportation story should be restored to the condition they were in just prior to construction of the railroad and so maintained. If feasible and compatible with their interpretive purposes, they may be used as foot and bridle trails.

The canal structures should be stabilized in their present condition and maintained so.

A cooperative agreement should be made with the Southern Railroad concerning use of the railroad right-of-way in the interpretive program.

Archaeological Resources

The formulation of a management plan for archaeological resources must be deferred until the recommended research is completed.

Recreational Facilities

The Division of State Parks has for many years successfully managed facilities for swimming, picnicking, family camping, organized camping, boating, fishing, hiking, horseback riding and other recreational activities as well as refreshment stands. These same management programs should be carried on at Pilot Mountain State Park with a few additions and modifications. Specific recommendations follow.

General

The importance of keeping all developments and facilities for public use at a high standard of neatness and cleanliness and meeting all public health and sanitation requirements cannot be overemphasized. To assure these high standards, "routines" such as are used at some of the other state parks should be prepared and carried out.

The present practice of disposing of solid wastes at a municipal land fill area is satisfactory and should be continued. The feasibility of contracting collection of solid wastes should be investigated.

All public use facilities recommended in this Master Plan should be managed and operated by the Division of State Parks.

Fees and Charges

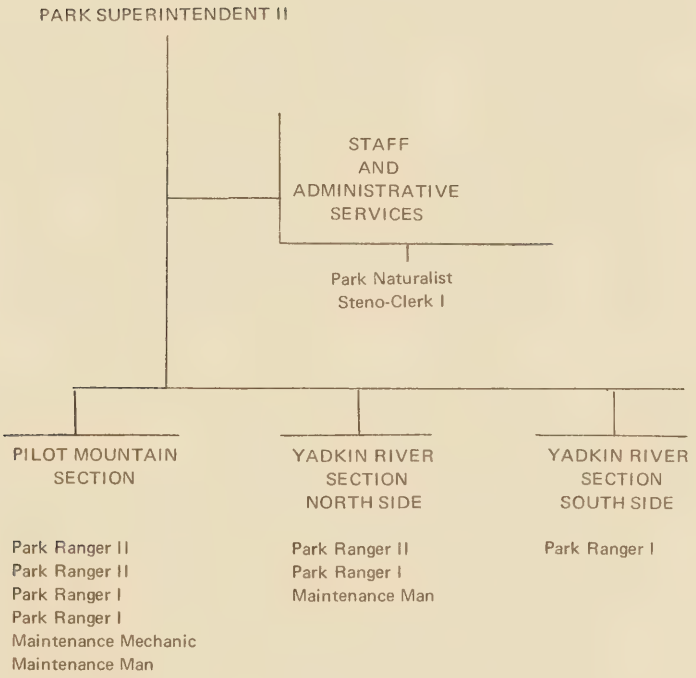
In addition to the fees and charges now in force in the North Carolina State Parks, a fee should be charged for use of bridle trails. One simple and effective way of doing this, is to require an annual license or permit for each animal used on the bridle trails.

STAFFING

The two sections of Pilot Mountain State Park are five miles apart. Furthermore, the river splits the Yadkin River section into two areas. Because of these circumstances, Pilot Mountain State Park must be administered as three distinct areas under the supervision of one Park Superintendent. This will require more personnel than would be needed for an equal acreage within one boundary.

The staff should be organized into four groups under the supervision of the Park Superintendent. One of these groups would provide services for the entire state park; another would be assigned to the administration and management of the Pilot Mountain section; another to the administration of the north side of the Yadkin River section; and the other to the administration of the south side of the Yadkin River section.

The staff that will be required when the state park is developed in accordance with this Master Plan is shown opposite. The sequence of staffing is indicated under *Priorities.*



EXPLANATORY NOTES:

(1) The Park Naturalist to be responsible also for interpretive programs at Hanging Rock and Stone Mountain State Parks.

(2) The Maintenance Mechanic and the Maintenance Man assigned to the Pilot Mountain section to perform maintenance in the Yadkin River section as directed by the Park Superintendent.

(3) The Maintenance Man assigned to the Yadkin River section, North Side, to perform work in other sections of the state park as directed by the Park Superintendent.

(4) Seasonal personnel (Park Naturalist, Chief Life Guard, Life Guards, Refreshment Stand Manager, Refreshment Stand Clerks, Park Attendants, etc.) to be employed in summer as required and in accordance with North Carolina State Park standards.

(5) Hourly personnel to be employed as required to supplement permanent and seasonal personnel.

Land Acquisition

Acquire tracts adjoining Yadkin River section
Acquire tracts adjoining Pilot Mountain section
Acquire Stony Ridge tracts

Research

Prepare check lists of plants and animals
Determine composition of forest existing before time of white man
Determine animal life supported by this forest

Park Development

Pilot Mountain Section - Summit Area

Relocate and improve park road between entrance and summit and construct park entrance
Construct parking area
Complete roadside improvement and landscaping for above road and parking area
Construct water supply and sewage disposal systems to serve picnic area, public toilets and park museum
Construct public toilets
Construct underground electric power line to summit
Improve trails including rebuilding walls, walks, steps, etc.
Develop picnic area

Yadkin River Section - North Side

Construct park road to ridge parking area, part of parking area and park entrance
Complete roadside improvements and landscaping for park road, parking area and park entrance
Construct ranger's residence and utilities for same
Construct maintenance buildings, maintenance area and utilities for same
Landscape residence and maintenance area
Develop ridge picnic area including water supply and sewage disposal for same
Develop walk-in and ride-in camp grounds on islands
Construct boat launching sites (Wildlife Resources Commission)

Corridor

Provide temporary parking areas at each end of corridor for horse trailers
Develop way station and rest area

General

Construct fire trails required by fire control plan
Construct hiking and horse trails throughout park
Raze all structures not to be retained for historic purposes or temporary use
Fill in swimming pool and drain ponds in Pilot Mountain section

Services to Park Users

Visitor Protection and Law Enforcement

Train and equip personnel for speedy rescue operations
Give personnel first aid training
Establish working relationship with rescue squads, hospitals, doctors and other medical services
Give personnel law enforcement and traffic control training
Establish cooperative relationships with state and local law enforcement agencies

Information

Provide highway signing (State Highway Commission)
Prepare detailed sign plan for entire state park
Provide signs and bulletin boards as required by current development and use

Construct information and orientation exhibit shelter at entrance to Yadkin River section - North side

Construct exhibit shelter information points at each end of corridor

Prepare trail maps

Interpretive Services

Prepare interpretive prospectus

Establish working relationships with members of school, college and university faculties

Recreation Programs

Establish working relationships with city and county recreation departments and with appropriate private organizations and clubs

Management Programs

Protection

Clearly mark all boundaries

Prepare written forest fire control plan

Provide tools and equipment required by forest fire control plan

Establish cooperative agreement with Division of Forestry

Give all personnel complete training in forest fire prevention and forest fire fighting

Prepare written building fire control plan

Give all personnel building fire prevention and fire fighting training

Provide tools and equipment required by building fire control plan

Establish cooperative agreements with local fire departments

Establish good cooperative relationships with state park neighbors

Natural Resources

Prepare vegetative type map

Rehabilitate summit area

Eradicate all exotic plants except those associated with historical resources

Historical and Archaeological Resources

Stabilize and "moth ball" Hauser farm buildings and the canal structures

Staffing

Employ Park Ranger II for Yadkin River section, North side

Employ Park Naturalist

Employ Stenographer-clerk (Part time)

PRIORITY 2

Research

Detailed record of changes made or caused by man
Determination of effects of soil, orientation, man's activities, etc. on forest types
Determination of successional story

Park Development

Pilot Mountain Section - Grassy Creek Developed Area

Construct park road from main entrance road to west picnic parking area
Construct west picnic parking area
Complete roadside improvement and landscaping for above park road and parking area
Develop west picnic area including water supply and sewage disposal for same

Pilot Mountain Section - Mountain Campground

Construct park road from main entrance road to mountain campground

Complete roadside improvement and landscaping for above park road
Construct one section of campground and utilities to serve same

Pilot Mountain Section - Entrance Area

Construct superintendent's residence, two ranger's residences, workshop and garage in maintenance area and utilities and road to serve them
Complete roadside improvement and landscaping for above park road and buildings

Pilot Mountain Section - Summit Area

Construct stairs to top of Pilot Mountain

Yadkin River Section - South Side

Construct entrance road, picnic parking area, road to residence and workshop, parking area for horse trailers and park entrance
Complete roadside improvement for above roads, parking areas, and park entrance
Develop picnic area including water supply and sewage disposal for same
Remodel existing residence, construct workshop and utilities to serve these buildings
Landscape above buildings
Construct boat launching site (Wildlife Resources Commission)

Corridor

Construct underpasses at all secondary road crossings
Erect fencing to control crossings and other entrances to Corridor
Landscape underpass areas

Services to Park Users

Information

Provide additional signs as required by current development and use
Install bulletin boards in developed areas
Construct information and orientation exhibit shelter at entrance to Yadkin River section

Interpretive Services

Prepare sign and wayside exhibit plan

Staffing

Employ Park Ranger I for Yadkin River section, South side

PRIORITY 3

Research

Reconstruct history of Hauser farm, especially history of land use

Produce information required to restore Hauser farm to its 1885 condition

Produce information required to portray and interpret agriculture of 1880's and operation of Hauser farm

Park Development

Pilot Mountain Section - Grassy Creek Developed Area

Extend park road to campground

Complete landscaping and roadside improvement for above road

Develop first section of family camping area and utilities for same

Develop camping area for youth groups

Construct lake, beach, bath house, refreshment stand and boathouse and utilities to serve them

Construct parking area to serve lake development

Landscape campground, parking area, and lake development

Erect fencing along Secondary Road 2061

Pilot Mountain Section - Entrance Area

Construct ranger's residence, seasonal employees barracks, remaining maintenance buildings and utilities to serve these structures

Construct park office and information center and utilities to serve it

Construct parking area to serve park office/information center

Landscape residence, barracks, maintenance area, park office/information center, and parking area

Services to Park Users

Information

Install displays at main orientation and information center

Provide additional signs as required by current development and use

Interpretive Services

Construct self-guiding trails (natural history)

Construct wayside exhibits (natural history)

Staffing

Employ Park Ranger I and Maintenance Man for Pilot Mountain section

Research

Determine Indian use in area of state park
Determine if important events involving Indians occurred in area of state park
Determine if Indian artifact sites exist in state park

Park Development

Pilot Mountain Section - Summit Area

Construct park interpretive center
Landscape park interpretive center

Corridor

Construct permanent parking areas for horse trailers at each end of corridor
Construct ride-in campground on Stony Ridge for horseback riders
Construct walk-in campground on Stony Ridge for hikers

Yadkin River - North Side

Construct parking area to serve Hauser farm
Enlarge ridge parking areas as required
Extend park road to river picnic area and construct parking area
Complete roadside improvement and landscaping for above road and parking area
Develop river front picnic area including water supply and sewage disposal for same

Pilot Mountain Section - Mountain Campground

Enlarge campground as required

Services to Park Users

Information

Revise trail maps
Prepare information folder
Add signs and bulletin boards as required by current development and use

Interpretive Services

Prepare museum exhibits plan
Construct and install museum exhibits
Prepare interpretive literature
Prepare interpretive devices plan for Hauser farm
Construct and install Hauser farm interpretive devices

Management Programs

Historical and Archeological Resources

Restore Hauser farm to 1885 condition
Furnish and equip Hauser farm as it was in 1885

Staffing

Employ Maintenance Mechanic for Pilot Mountain section
Employ Park Ranger I and Maintenance Man for Yadkin River section, North side

PRIORITY 5

Research

Reconstruct history of road and highway transportation
Reconstruct history of river transportation
Reconstruct history of railroad transportation
Produce information required to restore or reconstruct portions of old roads and to repair and stabilize canal structures

Park Development

Pilot Mountain Section - Mountain Campground

Enlarge campground as required

Ecological Education Center

Extend park road to ecological education center and construct parking areas to serve center
Complete roadside improvement and landscaping of above road and parking area
Construct water supply and sewage disposal systems for ecological education center
Extend underground electric power line to ecological education center
Construct ecological education center buildings
Landscape ecological education center grounds

Pilot Mountain Section - Grassy Creek Developed Area

Enlarge campground as required

Services to Park Users

Information

Provide signs as required by current development and use
Install new bulletin boards in developed areas as required
Up-date all information exhibits
Up-date all bulletin boards

Interpretive Services

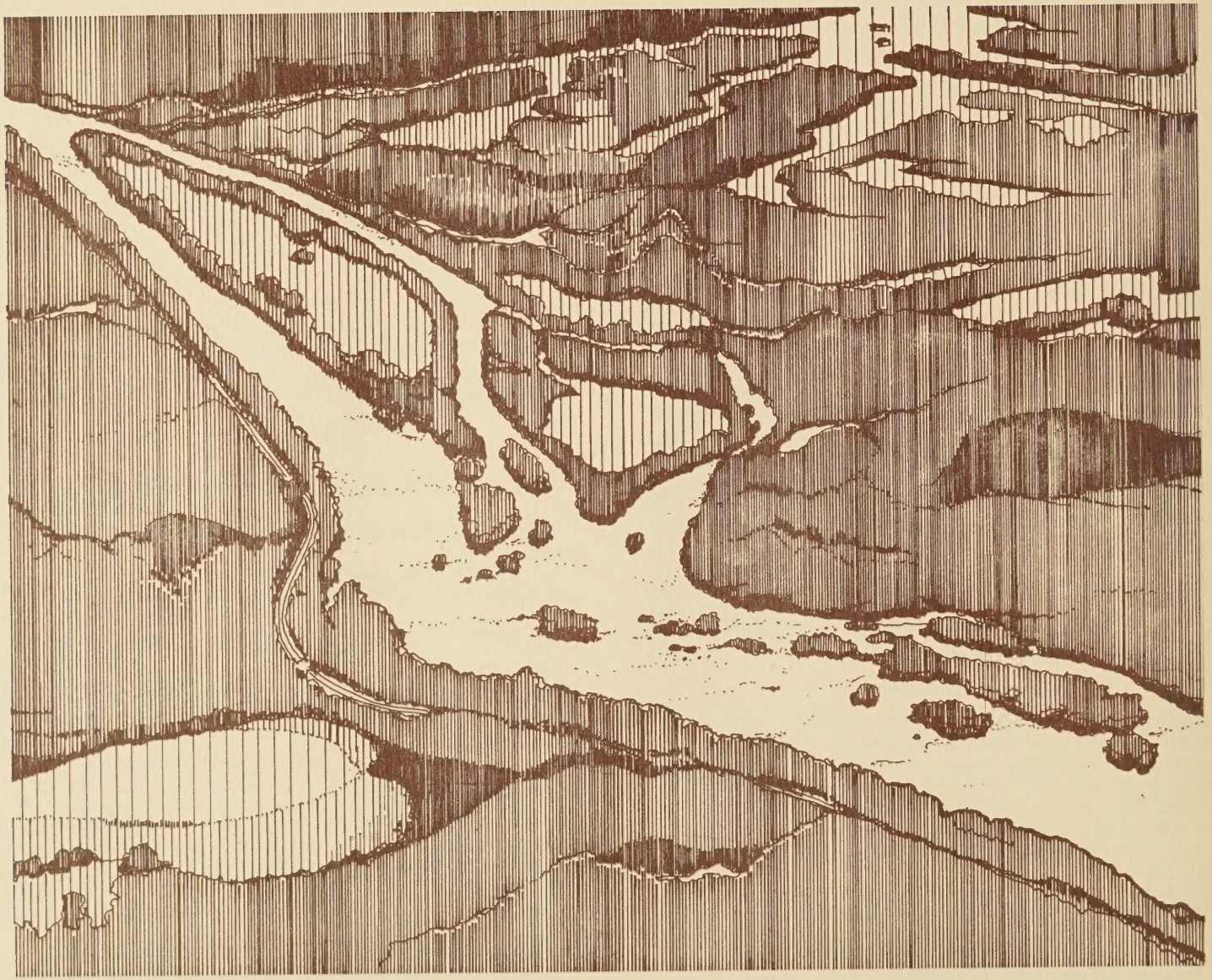
Prepare audio-visual program for park museum
Construct and install wayside exhibits for transportation story

Management Programs

Establish cooperative agreement with Southern Railway Company
Restore portions of old roads
Repair and stabilize canal structures

Staffing

Employ Park Ranger I for Pilot Mountain section



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